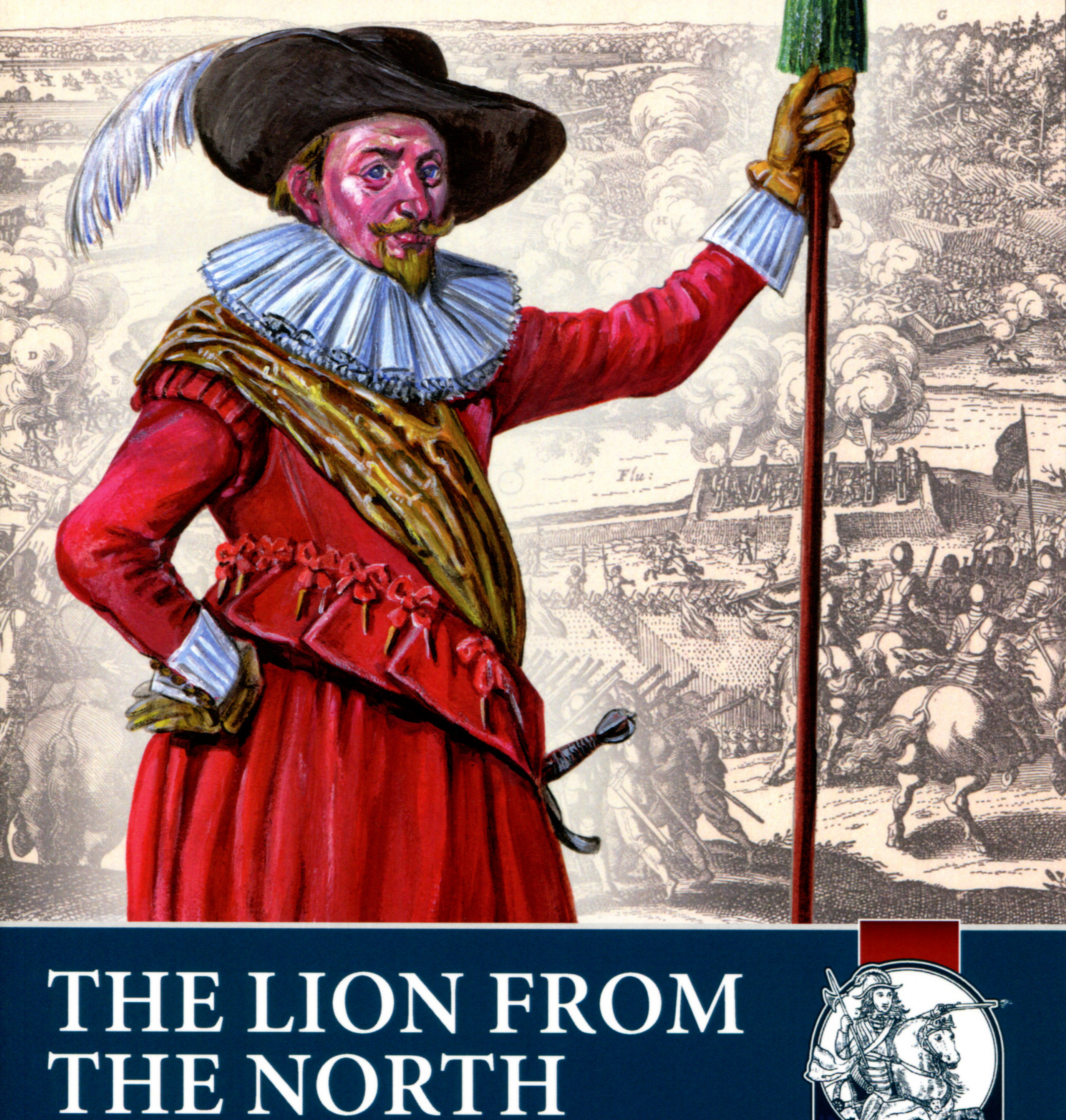


THE LION FROM THE NORTH

THE SWEDISH ARMY DURING THE THIRTY YEARS WAR: VOLUME 1, 1618-1632

MICHAEL FREDHOLM VON ESSEN

Century of the Soldier
1618-1721
No.54

The Century of the Soldier series – Warfare c.1618-1721

https://www.helion.co.uk/series/century-of-the-soldier-1618-1721.php

'This is the Century of the Soldier', Fulvio Testi, Poet, 1641

The 'Century of the Soldier' series covers the period of military history c. 1618–1721, the 'golden era' of Pike and Shot warfare. This time frame has been seen by many historians as a period of not only great social change, but of fundamental developments within military matters. This is the period of the 'military revolution', the development of standing armies, the widespread introduction of black powder weapons and a greater professionalism within the culture of military personnel.

The series examines the period in a greater degree of detail than has hitherto been attempted, and has a very wide brief, with the intention of covering all aspects of the period from the battles, campaigns, logistics and tactics, to the personalities, armies, uniforms and equipment.

About the author:

Professor Michael Fredholm von Essen is an historian and former military analyst who has published extensively on the history, defence strategies, security policies, and energy sector developments of Eurasia. He currently is the Head of Research and Development at IRI, an independent research institute. Educated at Uppsala, Stockholm, and Lund Universities, Michael Fredholm von Essen has lectured, including during conferences and as visiting professor, at numerous institutions and universities around the world. He is the author of a large number of books, articles, and academic papers, including *Muscovy's Soldiers: The Emergence of the Russian Army, 1462-1689* (Helion, 2018); *Charles XI's War: The Scanian War between Sweden and Denmark, 1675-1679* (Helion, 2019); *Transnational Organized Crime and Jihadist Terrorism: Russian-Speaking Networks in Western Europe* (Routledge, 2017); *Understanding Lone Actor Terrorism: Past Experience, Future Outlook, and Response Strategies* (Routledge, 2016); *Afghanistan Beyond the Fog of War: Persistent Failure of a Rentier State* (NIAS, 2018); *Eight Banners and Green Flag: The Army of the Manchu Empire and Qing China, 1600-1850* (Pike and Shot Society, 2009); and a large number of articles on early modern warfare in the *Arquebusier*, the journal of the Pike and Shot Society.

About the artist:

Sergey Shamenkov graduated from the Academy of Arts in Lviv. He is a sculptor, author and illustrator who specialises in uniformology, military and costume history. His principal area of interest is the study of the Swedish army of Charles XII. When not painting, he is involved in re-enactment, depicting Ukrainian and Swedish units of the 17th and 18th century.

THE LION FROM THE NORTH

Volume 1 – The Swedish Army during the Thirty Years' War, 1618–1632

Michael Fredholm von Essen

'This is the Century of the Soldier', Fulvio Testi, Poet, 1641

Helion & Company

Helion & Company Limited
Unit 8 Amherst Business Centre
Budbrooke Road
Warwick
CV34 5WE
England
Tel. 01926 499 619
Email: info@helion.co.uk
Website: www.helion.co.uk
Twitter: @helionbooks
Visit our blog http://blog.helion.co.uk/

Published by Helion & Company 2020
Designed and typeset by Serena Jones
Cover designed by Paul Hewitt, Battlefield Design (www.battlefield-design.co.uk)

Cover Image: Captain, Norrland territorial regiment, 1626. Illustration by Sergey Shamenkov © Helion & Company 2020

Text © Michael Fredholm von Essen 2020
Illustrations © as individually credited
Colour artwork by Sergey Shamenkov © Helion & Company 2020
Maps drawn by Alan Turton © Helion & Company 2020

Illustrations attributed to Army Museum, Stockholm, are reproduced under a Creative Commons license and derive from the website, <https://digitaltmuseum.se>. Illustrations attributed to Royal Armoury, Stockholm, or Skokloster Castle are reproduced under a Creative Commons license and derive from the web site, <http://emuseumplus.lsh.se>. Other illustrations are reproduced under GNU Free Documentation License (GNU FDL) coupled with the Creative Commons Attribution Share-Alike License, or derive from the author's personal collection. Photographs attributed to Medströms are reproduced with the permission of this publisher. The artwork by the late Tommy Hellman, an accomplished expert on the arms and equipment of early modern soldiers and a good friend, is reproduced with the permission of his family.

Every reasonable effort has been made to trace copyright holders and to obtain their permission for the use of copyright material. The author and publisher apologise for any errors or omissions in this work, and would be grateful if notified of any corrections that should be incorporated in future reprints or editions of this book.

ISBN 978-1-911628-57-6

British Library Cataloguing-in-Publication Data.
A catalogue record for this book is available from the British Library.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form, or by any means, electronic, mechanical, photocopying, recording or otherwise, without the express written consent of Helion & Company Limited.

For details of other military history titles published by Helion & Company Limited, contact the above address, or visit our website: http://www.helion.co.uk

We always welcome receiving book proposals from prospective authors.

Contents

Chronology iv
Introduction ix
Prologue xii

1. The Wars of Gustavus Adolphus 19
2. Raising the Swedish Army 95
3. Army Organisation 117
4. Weapons and Equipment 152
5. Uniforms, Dress and Appearance 199
6. Tactics and Strategy 207
7. Intelligence 224
8. The Military Legacy of Gustavus Adolphus 234

Appendix I: The Marching Order of the Swedish Army, September 1631 239
Appendix II: Order of Battle, Lützen, 1632 244
Appendix III: Selected Enlisted Regiments of Gustavus Adolphus 248

Colour Plate Commentaries 250
Further Reading 265
Bibliography 268

Chronology

All dates N.S.

Significant world events with a major impact upon Sweden but no Swedish involvement are marked in italics.

1611	
6 Feb	War breaks out with Muscovy
14 Apr	Denmark declares war on Sweden (the Kalmar War)
26 July	Sweden conquers Novgorod
9 Nov	Gustavus Adolphus inherits the Swedish throne at age 16
1612	Gustavus Adolphus shoulders military command in the Kalmar War; he briefly assumes the title of Tsar of Muscovy, with the support of Moscow
1613	
29 Jan	Kalmar War between Denmark and Sweden ends with Peace of Knäred
May	War gradually resumes with Muscovy
1615	
Aug–Sep	Gustavus Adolphus lays siege to Pskov
1617	
9 Mar	War between Sweden and Muscovy ends with Peace of Stolbovo
19 June	War resumes with the Polish-Lithuanian Commonwealth; Swedes invade Livonia
22 Oct	Coronation of Gustavus Adolphus as King of Sweden
1618	
23 May	*Defenestration of Prague, outbreak of the Bohemian Revolt and the Thirty Years' War*
15 Nov/8 Dec	Swedish truce with the Commonwealth
1619	
26 Aug	*Frederick V, Elector Palatine, elected King of Bohemia*

28 Aug	*Ferdinand II elected Holy Roman Emperor* Gustavus Adolphus negotiates with Frederick V about a possible alliance primarily against the Commonwealth
1620	
8 May	Gustavus Adolphus travels incognito to Germany
8 Nov	*Catholic League commander Johann t'Serclaes von Tilly defeats the Bohemian revolt at White Mountain*
1621	
9 Apr	*War resumes between Spain and the Dutch Republic (the United Provinces)*
3 Aug	War resumes with the Commonwealth; Gustavus Adolphus's fleet departs for Livonia
25 Sep	Gustavus Adolphus takes Livonia's capital Riga
12 Oct	Gustavus Adolphus takes Courland's capital Mitau
1622	
23 Jun	After a few months in Sweden, Gustavus Adolphus returns to Livonia with reinforcements
7 Dec	Swedish truce with the Commonwealth
1623	
Nov	Gustavus Adolphus invited to join a Protestant alliance to restore Frederick V to the Bohemian throne; the parties fail to agree
1624	
12 Aug	*Cardinal Armand Jean du Plessis, Duke of Richelieu, appointed chief minister of France*
1625	
Jan	*Danish King Christian IV decides to join the war in Germany, so as to forestall any Swedish involvement*
25 July	Declining to join a Protestant alliance under Danish leadership, Sweden resumes the war with the Commonwealth, taking Kokenhusen
26 Aug	Swedes takes Dorpat
5 Sep	Gustavus Adolphus takes Birze
27 Sep	Gustavus Adolphus takes Bauska
4 Oct	Gustavus Adolphus takes Mitau
1626	
17 Jan	Gustavus Adolphus defeats a Commonwealth army at Wallhof
6 July	Sweden invades Polish Prussia, first landing in and taking Pillau in Brandenburgian East Prussia
27 Aug	*Tilly defeats Christian IV at Lutter-am-Barenberge*
22 Sep	Gustavus Adolphus defeats Commonwealth forces in the first battle of Mewe

1 Oct	Gustavus Adolphus defeats Commonwealth forces in the second battle of Mewe
17 Nov	Commonwealth forces retake Wormditt

1627

Feb	*Imperial commander Albrecht von Wallenstein conquers Mecklenburg, Pomerania, and Holstein in northern Germany*
2 Apr	Commonwealth forces retake Putzig
15 Apr	Commonwealth victory at Hammerstein
17 May	After a few months in Sweden, Gustavus Adolphus returns to Pillau with reinforcements
25 May	Indecisive Swedish–Commonwealth naval battle off Putzig; no ships lost but a Commonwealth squadron successfully penetrates the blockade of Danzig
2 June	Gustavus Adolphus wounded crossing the Vistula at Käsemark
13 July	Commonwealth troops retake Mewe
14 July	Swedes capture Käsemark
17–18 Aug	Inconclusive Swedish–Commonwealth battle of Dirschau; Gustavus Adolphus again wounded
11 Oct	Gustavus Adolphus retakes Wormditt
18 Oct	*Danish army surrenders to Wallenstein who conquers Jutland, extending Imperial power yet further to the north*
28 Nov	Swedish–Commonwealth naval battle off Oliwa near Danzig; both the Swedish and Commonwealth admirals fall in the battle

1628

23 May	Wallenstein's army lays siege to Stralsund
3 July	Stralsund signs a 30-year treaty with Gustavus Adolphus, offering a base in exchange for protection; a Swedish relief force disembarks to defend Stralsund against Wallenstein's army
6 July	Wallenstein assumes personal command of the siege of Stralsund
22 Jul	Wallenstein hands over command at Stralsund to Hans Georg von Arnim, who is left to abandon the siege and withdraw the army
25 July	Gustavus Adolphus lays siege to Danzig; three Commonwealth warships lost in an artillery battle between the Commonwealth fleet and the Swedish army, but in August Gustavus Adolphus abandons the siege
23 Oct	Commonwealth victory at Osterode

1629

17 Jan	*Outbreak of Third Mantuan War diverts Imperial attention to Italy*
12 Feb	Swedish Field Marshal Herman Wrangel defeats a Commonwealth army at Górzno
2–6 Mar	Inconclusive meeting between Christian IV and Gustavus Adolphus at Ulfsbäck, Småland province, southern Sweden
22 May	*Peace of Lübeck between the Holy Roman Empire and Denmark enables Imperial support to the Commonwealth*
27 Jun	A combined Commonwealth–Imperial army under Arnim and

	Stanisław Koniecpolski defeats Gustavus Adolphus at Honigfelde; Gustavus Adolphus saves most of the army but loses his hat, which is taken as a trophy
July	Arnim and Koniecpolski lay siege to Marienburg, but without success
Aug.	Arnim and Koniecpolski move against Königsberg, but again fail to dislodge the Swedes
26 Sep	Swedish–Commonwealth Truce of Altmark
1630	
June	Gustavus Adolphus musters a Swedish army near Stockholm
27 June	Swedish fleet departs for Germany
6 July	Gustavus Adolphus lands at Peenemünde in Pomerania
20 July	Swedes take Stettin, enabling the collection of tolls on the River Oder trade
25 Aug	Swedes under Dodo von Innhausen und zu Knyphausen take Wolgast
6 Sep	*Wallenstein dismissed from Imperial service; Tilly assumes command of the combined forces of the Emperor and the Catholic League*
7 Oct	Gustavus Adolphus takes Riebnitz
23 Nov	Swedes defeat Imperials at Falkenberg
1631	
4 Jan	Gustavus Adolphus defeats Imperials at Marwitz
23 Jan	Treaty of Bärwalde between France and Sweden; France agrees to pay subsidies
25 Feb	Gustavus Adolphus takes Demmin
13 Apr	Gustavus Adolphus takes Frankfurt-an-der-Oder
20 May	Tilly's army sacks Magdeburg, which had declared for Sweden
22 June	Swedes under Johan Banér take Havelberg; Brandenburg allies with Sweden
27 July	Gustavus Adolphus defeats Tilly at Burgstall
1 Aug	Tilly attacks Gustavus Adolphus's fortified camp at Werben without success
7 Aug	Tilly again attacks Gustavus Adolphus's camp at Werben without success
Sep	Saxony, Bremen, and Hesse-Kassel ally with Sweden
17 Sep	Gustavus Adolphus defeats Tilly at Breitenfeld
16 Oct	Swedes under Åke Tott take Rostock
18 Oct	Gustavus Adolphus takes Würzburg
15 Nov	*Arnim's Saxons take Prague*
27 Nov	Gustavus Adolphus takes Frankfurt-am-Main
15 Dec	*Wallenstein reinstated as temporary Imperial commander-in-chief (General-Capo)*
16 Dec	Gustavus Adolphus and a few companies cross the Rhine, facing Spanish troops for the first time during the war
17 Dec	Swedish victory over the Spaniards at Oppenheim cuts the Spanish supply line along the Rhine

23 Dec	Gustavus Adolphus takes Mainz
1632	
2 Jan	Swedish Chancellor Axel Oxenstierna warns Swedish commanders and merchants in Gothenburg that Sweden is now de facto at war with Spain and its powerful navy, urging the west coast defences to be prepared
22 Jan	Tott takes Wismar and 13 Imperial warships
2 Mar	Gustavus Adolphus takes Kreuznach
9 Mar	Tilly defeats Gustav Horn at Bamberg
15 Mar	Gottfried Heinrich zu Pappenheim defeats Swedes at Albaxen and Stahle
6 Apr	Gustavus Adolphus takes Donauwörth
13 Apr	*Wallenstein nominated full Imperial commander-in-chief, assumes command of the combined forces of the Emperor and the Catholic League*
13–16 Apr	Gustavus Adolphus defeats Tilly at Rain-am-Lech ('Crossing of the Lech'), followed by a Swedish offensive into Bavaria; death of Tilly
24 Apr	Gustavus Adolphus enters Augsburg, a town with an impressive Lutheran history, accompanied by Frederick V, the dispossessed King of Bohemia
26–29 Apr	Pappenheim harasses Tott's army at Horneburg
1 May	Wolf Heinrich von Baudissin replaces Tott as commander of the army in the Lower Saxon Circle
17 May	Gustavus Adolphus takes Munich
25 May	*Wallenstein retakes Prague and drives Arnim's Saxons from Bohemia*
27 Aug	Having received reinforcements, Gustavus Adolphus's field army reaches its highest strength ever
31 Aug	Banér seriously wounded
3 Sep	Gustavus Adolphus attacks Wallenstein's fortified camp at Alte Feste without success; Swedish artillery commander Lennart Torstensson captured
4 Sep	Gustavus Adolphus breaks camp, abandons attempt to draw Wallenstein into open battle
1 Nov	Wallenstein takes Leipzig
7 Nov	Horn takes Benfeld, Alsace, thus closing the Rhine to the Spaniards
16 Nov	Battle of Lützen, death of Gustavus Adolphus; command passes to Bernard of Saxe-Weimar

Introduction

When in July 1630, King Gustavus II Adolphus and the Swedish field army landed at Peenemünde on the island of Usedom in northern Germany, they were greeted as the saviours of the beleaguered German Protestants. Gustavus Adolphus himself was immortalised as the 'Lion from the North'. The 'Swedish phase' of the Thirty Years' War had begun. Or so, at least, goes traditional historiography.

In reality, the Swedish position was not quite as assertive, nor as confident, even though Gustavus Adolphus for reasons of religion and superstition rapidly gained considerable popular support within the Protestant population of northern Germany. Nor was the Swedish army yet regarded as invincible. In December 1630, Gustavus Adolphus soberly assessed that 'the enemy is weak in infantry, a match for us in cavalry, and has great advantage with regard to supplies'.[1] On 15 September 1631, two days before the battle of Breitenfeld, John George, the Elector of Saxony, inspected the Swedish army. 'Not nearly as bad as We were led to believe', was his verdict.[2] At the time, this was no doubt a fair description of the Continental assessment of the Swedish military establishment. However, its reputation as a formidable military force grew, and Gustavus Adolphus established his credentials as the Lion from the North, by actual accomplishments as well as propaganda. Moreover, 18 years after the Swedish invasion, at the Peace of Westphalia, Sweden constituted one of the guarantors of the agreement, which has been described as no less than the beginning of the modern international system, based upon peaceful coexistence among sovereign states.

The reason for this was the Swedish army. Not because of its size, but because Gustavus Adolphus through decades of fighting on the eastern front, against Muscovites, Lithuanians and Poles, had moulded it into a formidable military machine that had to be taken seriously by the military establishments of far wealthier and more populous countries than Sweden. How did this happen? This volume describes and analyses the early modern Swedish army, with a particular emphasis on the reforms introduced by Gustavus Adolphus before and during the Thirty Years' War. Furthermore, it aims to expand our understanding of the Swedish army during the

---

[1] Letter dated 4 December 1630 (O.S.), C.G. Styffe (ed.), *Konung Gustaf II Adolfs skrifter* (Stockholm: P.A. Norstedt & Sõner, 1861), pp.545–6.

[2] Richard Brzezinski, *The Army of Gustavus Adolphus* 1: *Infantry* (London: Osprey, Men-at-Arms 235, 1991), p.24.

Thirty Years' War by also focusing on its operations on the eastern front, in addition to the better-known operations in Germany against the Catholic League and the Holy Roman Empire of the German Nation, as its full name went. Sweden had a long history of conflict with neighbouring countries, and the reforms introduced by Gustavus Adolphus had their origin in his previous wars. The Kalmar War with Denmark, the Novgorod and Pskov campaigns against Muscovy, and the war with the Polish-Lithuanian Commonwealth (the *Rzeczpospolita*), formally known as the Crown of the Kingdom of Poland and the Grand Duchy of Lithuania, played important roles in preparing the Swedish army for the wars on the Continent from 1630 onwards. While some of the technical and tactical innovations early on attributed to the Swedish Army will be shown to be myths, others were real. The Swedish model of warfare was copied by most west European militaries, including Sweden's opponents, and, it will be shown, laid the foundation for subsequent British infantry and French cavalry tactics. Possibly of yet more enduring importance were the Swedish Lord High Chancellor (Swedish: *rikskansler*) Axel Oxenstierna's administrative reforms. A conscription system was established which consistently managed to raise troops, despite the small population of Sweden and its territories. A logistics system was introduced which could supply the armies, despite the vast geographical depth of operations, ranging from northern Scandinavia to the Alps. The intelligence service was developed into a comprehensive support system to military operations. The Swedish army that entered the Thirty Years' War and the organisation that enabled it formed the foundation for the subsequent Swedish rise to regional great power status.

The focus of the present volume is the Swedish Army during the first phases of the Thirty Years' War. It is not intended as a comprehensive history of the war, which beyond and above the religious divide between Catholics and Protestants brought together several different conflicts (to be precise, the Habsburg attempt to assert authority in the Holy Roman Empire and on the southern Baltic coastlands, an ongoing war between Spain and the Dutch Republic, the struggle between Spain and France, rivalry over the Baltic Sea between Denmark and Sweden, and within Sweden and the Polish-Lithuanian Commonwealth, a dynastic conflict between different lines of the Swedish Vasa family). Such an endeavour would demand considerably more space than the present format allows. Nor does it aim to provide a comprehensive military history of Sweden, with details on all battles and campaigns. It will also not describe the opposing forces, of the Commonwealth, the Catholic League, and the Holy Roman Empire, since they are covered in other books of the series. What this volume hopes to achieve is to describe all aspects of the Swedish army during the war – recruitment, organisation, weapons, equipment, training, and tactics – that are relevant for an understanding of how the Swedish army emerged and built a foundation for Sweden as a great power. The present work will be followed by a second volume, which will focus on developments within the Swedish army after the death of Gustavus Adolphus.

At the time of the war, some of the belligerent powers followed different calendars. The Gregorian calendar, named after the sixteenth-century Pope Gregory XIII who introduced it, had been developed as a correction to an observed error in the old Julian calendar. The visible result of the correction was that the date was advanced 10 days, that is, 4 October 1582 was followed by 15 October 1582. France and the Holy Roman Empire changed calendar on this date, as did most Catholic nations. However, many Protestant countries including Sweden initially objected to adopting a Catholic innovation. They retained the Julian calendar, which for this reason differed from the one used in Catholic nations and at present. Old Style (O.S.) and New Style (N.S.) are terms commonly used with dates to indicate that the calendar convention used at the time described is different from that in use at present. Unless noted otherwise, the dates given here will be N.S., since the events described primarily took place in Catholic nations. However, Swedish archival documents relating to the war commonly use the O.S. calendar, and most Swedish-language works describing the war still follow this style. This frequently leads to confusion among historians. I have yet to see a work on the Thirty Years' War without the occasional, wrongly calculated date, and no doubt there will be mistakes in the present volume, too.

Prologue

King Gustavus II Adolphus of Sweden

Although the real character of Gustavus Adolphus (1594–1632; *r.* 1611–1632) is difficult to separate from the personality cult which had been built around his person already in his lifetime, and even more so after his death, there is no doubt that he was a truly charismatic ruler. Many contemporary eyewitnesses have given evidence that he was well liked, even admired, by most of those who met him, whether nobles or commoners. To give just one example, Robert Monro (*c.* 1590–1680), a Scotsman in Swedish service, later described the King in the following words:

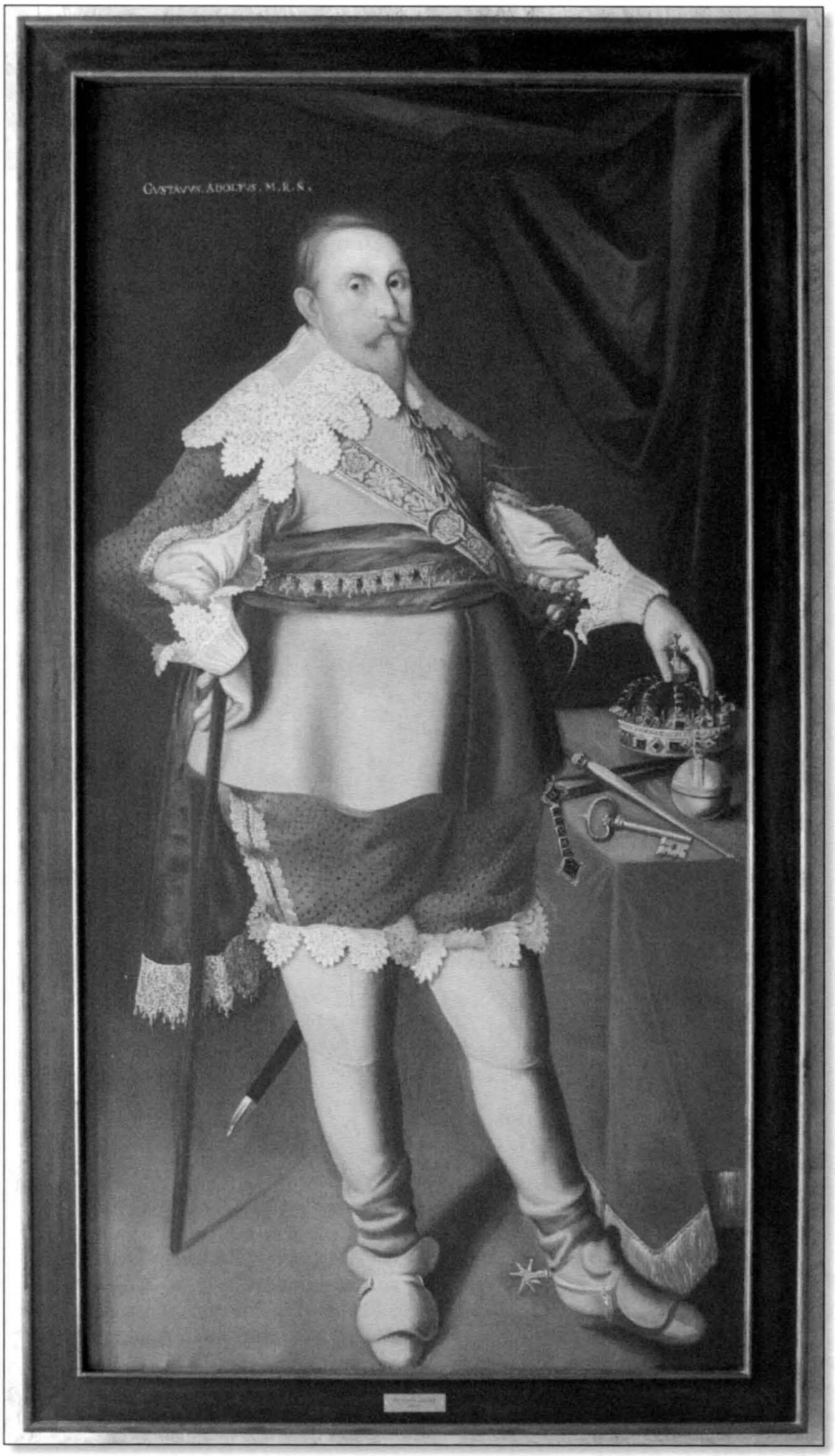
> To conclude then this observation, we see that as courage in warres is much worth, for obtaining of victory; so is the wisedome of a Generall or Leader in warres, as *Gustavus* was, of so much worth, even in the obtaining of this victory, that the spirit of him alone, and skill in direction, was better than thousands of armed men. The enemy being in this Battaile neere twelve thousand men, at least, stronger than we; yet *Gustavus* alone on our side was better, and of more worth to us, then that multitude to our enemies … O would to God I had once such a Leader againe to fight such an other day.[1]

Although Gustavus Adolphus trusted his own counsel and would not allow himself to be ruled by others, he was co-operative and would listen to their opinions and advice. He was generally friendly and in a good mood. He had a sense of humour, made jokes, and enjoyed social events such as banquets and dances. Like his father, the unpredictable Charles IX, Gustavus Adolphus had a temper and sometimes reacted with anger. However, unlike his father, grandfather, and most uncles he was not cruel or vindictive, and did not physically violate those who displeased him. The only man he was conditioned never to trust was his cousin, Polish King Sigismund III Vasa (1566–1632), and in extension, those who promoted the Catholic faith, in particular Jesuits. But there were reasons for this, as will be shown.

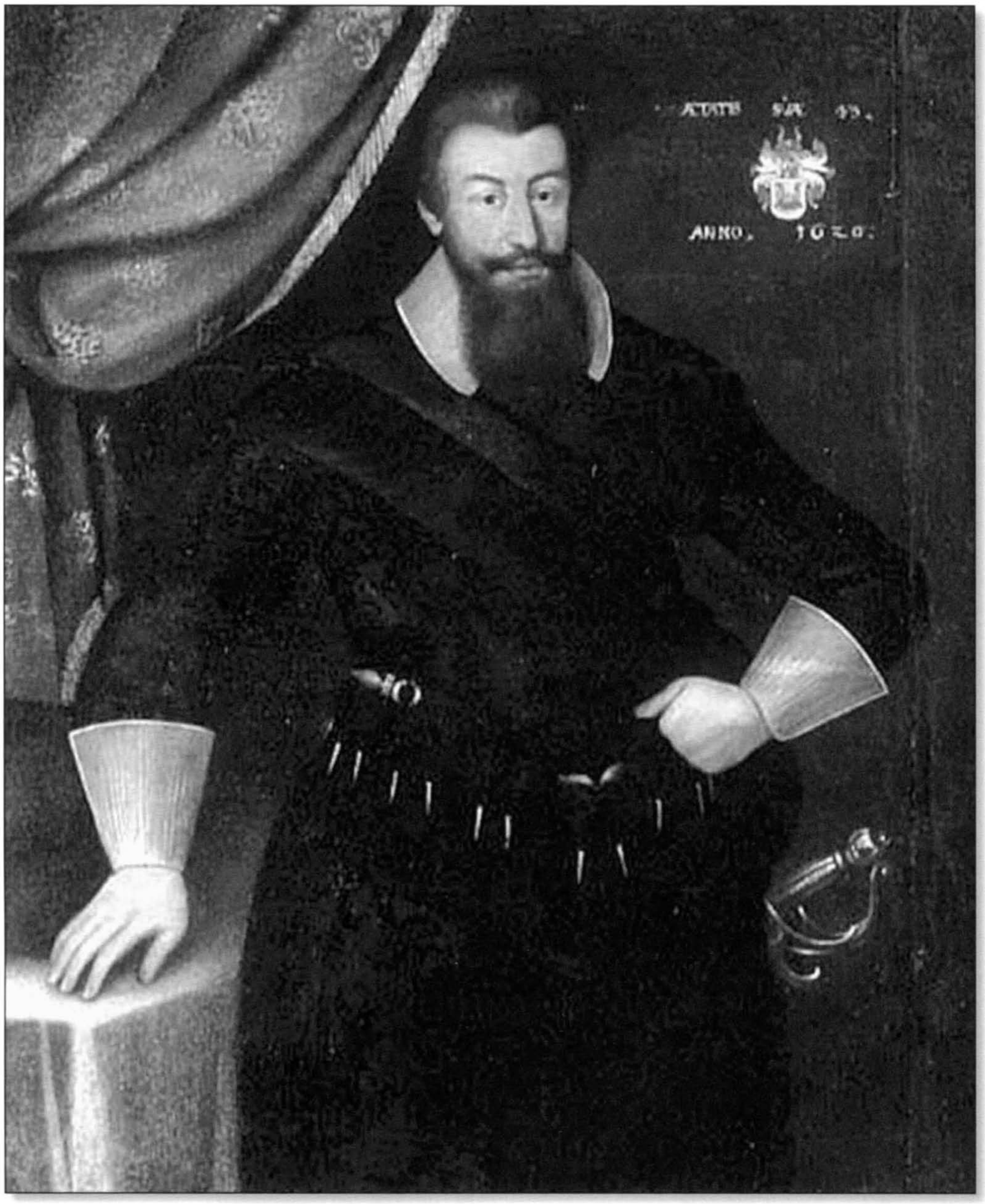
Highly educated in both the sciences and humanities, Gustavus Adolphus was also well versed in several languages. In addition to Swedish, German,

---

[1] Robert Monro, *Monro, His Expedition with the Worthy Scots Regiment (Called Mac-Keyes Regiment)*, vol. 2 (London: William Jones, 1637), p.70. The battle referred to was the battle of Breitenfeld.


GVSTAVVS. ADOLFVS . M.R.S.

Gustavus Adolphus, late 1620s. The King frequently wore a sleeveless buff coat of elk hide with soft sleeves of silk over a more elaborate shirt together with breeches tucked into his high riding boots. The riding boots are turned up, with the long linen stockings decorated with embroidery or lace at the top turned down over the upper boots in the customary manner. (Jacob Heinrich Elbfas; Photo: Medströms)


ÆTATIS SUÆ 43.
ANNO. 1626.

Axel Oxenstierna. (Jacob Heinrich Elbfas, 1626; Photo: Medströms) and probably some Finnish (the three predominant languages of the Swedish kingdom), he spoke Latin, Italian, French, and Dutch. He understood Spanish, English, and Scots, and knew some Polish and Russian.[2] He was trained in philosophy and jurisprudence, read and was influenced by the Dutch jurist Hugo Grotius (1583–1645), and (in striking contrast to many other rulers, then and later) grounded his arguments in these disciplines when speaking before the council or parliament. In 1627, he even began to write a political history of Sweden under his ancestors, since he argued, based on the examples provided by ancient historians such as Polybius and Livy, that history offered lessons on how to rule and what to avoid.[3] Yet, Gustavus Adolphus was also genuinely pious. God ruled over life and death, and the best that mankind, even a man born to kingship, could aim for was to do his duty in accordance with his Christian conscience, even if this conflicted with reasons of state.[4] Gustavus Adolphus was not afraid of delegating important tasks to others. He trusted his advisors. He particularly relied on his chancellor since 1612, the 11-years older Axel Oxenstierna (1583–1654). Gustavus Adolphus allowed Oxenstierna to develop the state machinery as needed, without fear that the Chancellor might conspire against him. Indeed, Sweden at the time of Gustavus Adolphus's ascension to the throne can be said not yet to have had a machinery of state, and without Oxenstierna, it is unlikely that the country would have left the Thirty Years' War a victorious great power, or even a functioning state.

Gustavus Adolphus's personal views on military matters are probably easiest to identify through his writings on the subject. His views on the importance of infantry and conscription can be found in his *Organisation of Soldiers* which was written in 1619 or possibly 1620. In this work, he explains the primacy of the infantry, and also links this view to the old Scandinavian tradition of calling out the nation at arms. 'The infantry I mention first,' Gustavus Adolphus writes, 'since after God, the entire nation's prosperity hinges on them.' He then explains that only the infantry can handle operations in the vast forest lands of the kingdom, man the warships and defend the sea lanes, on which the nation's prosperity depends, and defend and attack fortified sites. In short, the kingdom needs its infantry to be of good quality and in sufficient numbers, for which conscription is required.[5] Building upon the *Organisation of Soldiers*, he wrote the *Articles of War* which regulated military law.[6] Finally, he began to write the incomplete

---

[2] Nils Ahnlund, *Gustav Adolf den store* (Stockholm: Aldus/Bonniers, 1963), pp.22–3.

[3] Gustavus Adolphus, 'K. Gustaf Adolfs egen historia', C.G. Styffe (ed.), *Konung Gustaf II Adolfs skrifter* (Stockholm: P.A. Norstedt & Söner, 1861), pp.69–90, on pp.70–71.

[4] Sven Lundkvist, 'Verklighetsuppfattning och verklighet: En studie i Gustav II Adolfs handlingsramar', Robert Sandberg (ed.), *Studier i äldre historia tillägnade Herman Schück 5/4 1985* (Stockholm: Festschrift, 1985), pp.227–41.

[5] Gustavus Adolphus, 'Krigsfolks-Ordning', C.G. Styffe (ed.), *Konung Gustaf II Adolfs skrifter* (Stockholm: P. A. Norstedt & Söner, 1861), pp.1–61, on pp.5–6. Beginning with references to the military practices of the ancient Jews, Assyrians, Persians, Greeks, and Romans, and of the dark age and medieval Scandinavians, Gustavus Adolphus intended this as a major treatise on warfare but only found time to complete the first part, on conscription.

[6] Gustavus Adolphus, *Krijgz articlar, som fordom then stormechtigste furste och herre, herr Gustaff Adolph, then andre och store, Sweriges, Göthes och Wendes konung, storfurste til Finland, hertig vthi Estland och Carelen, herre vtöfwer Ingermanland, &c. loffwerdigst i åminnelse hafwer låtit göra och författa, Anno M. DC. XXI* (Stockholm: Ignatio Meurer, 1621). Although dated 1621,

On the Duties of Soldiers, which explains what he expected of his commanders. We can assume that this also described what Gustavus Adolphus expected of himself. He listed the characteristics of a good commander as 'virtue, knowledge, caution, authority, and luck.' He wanted leaders who in clear conscience could tell their men that 'I want you to follow not only my instructions and orders but also my example.' To avoid empty words, he succinctly defined what he meant by a commander's virtue: 'I demand of him virtue in the form of honesty in his daily life, vigour and industriousness in his duties, bravery in danger, diligence in his work, and speed in fulfilment.'[7] But, he reminded the reader, knowledge of military science was required, too. This could be acquired in two ways, he explained, either through study or experience. He held study as the safer method, since it enabled the student to gain knowledge through the fortune and misfortune of others, instead of having to live through all these risks himself. Besides, modern science was required to plan camps and build fortifications.[8]

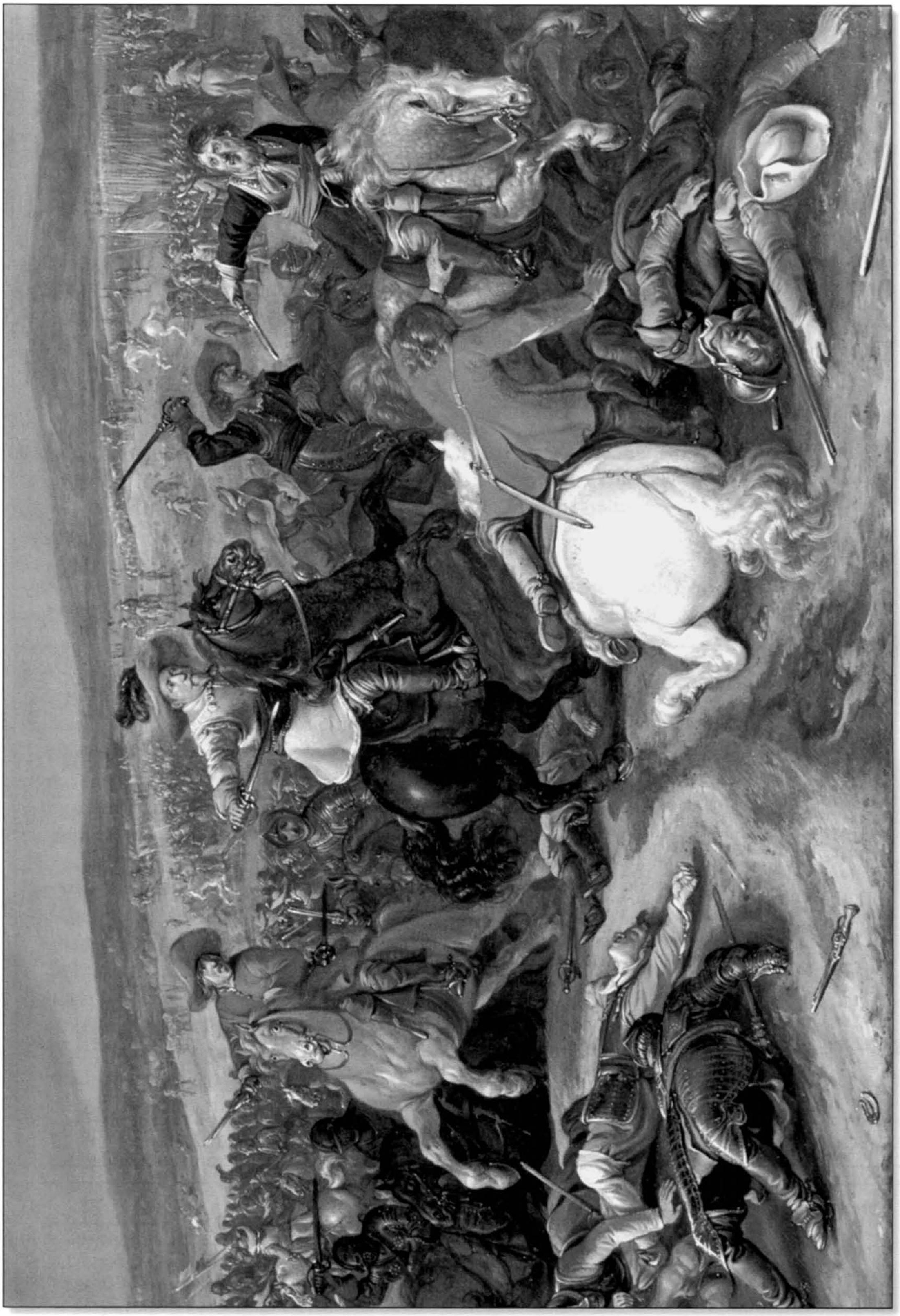
Gustavus Adolphus lived as he taught. In war he led from the front, sharing the labours and risks of his men. During the siege of Riga in 1621 and again at the landing in Germany in 1630, he himself, spade in hand, took part in the physical labour of erecting field fortifications. He trusted implicitly in his own ability and the will of God. In battle, he was prone to take unnecessary risks, or at least this was the view of his friends and advisors. He was known to have been wounded in battle 13 times. As a result, and in particular because of the wound sustained in 1627 at Dirschau, he found it difficult to wear a breastplate, which naturally increased the risk in battle further and directly may have contributed to the King's death five years later. Yet, Gustavus Adolphus ruled in a time when a Swedish monarch first and foremost was a military commander who was expected to lead from the front. When in 1632 he died in battle, he and his trusted advisors had elevated Sweden in power as well as domestic development. It is telling that the state that he had Oxenstierna build did not fall apart upon his death. Nor did those who survived him then worry as much about what might happen after the King's death, as they had done when he was younger. In 1632, there was no longer any risk of sudden state collapse, and nobody disputed his wish that his six-year-old daughter, Christina, succeed him. Gustavus Adolphus presided over the making of Sweden into a modern state, and perhaps the best testimony to his ability is that upon his death, his policies endured for many years even without a warrior-king on the throne.

---

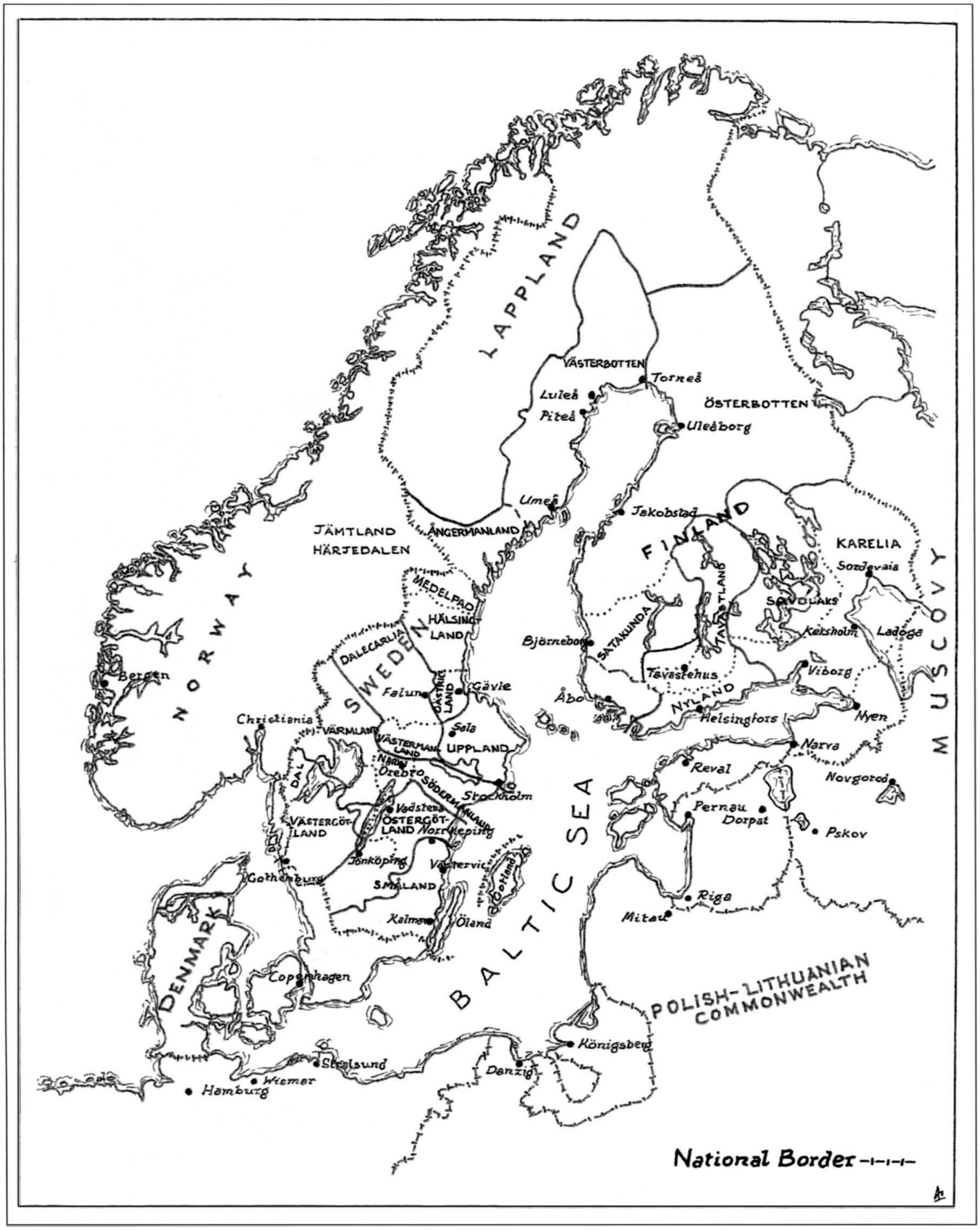
when the Articles of War were issued, this print edition was published after Gustavus Adolphus's death. The King's handwritten draft version of the Articles is reprinted in Gustavus Adolphus, 'Utkast till Krigs-Artiklarna, utfärdade den 15 juli 1621', C.G. Styffe (ed.), *Konung Gustaf II Adolfs skrifter* (Stockholm: P.A. Norstedt & Söner, 1861), pp.243–53.

[7] Gustavus Adolphus, 'Om krigsmäns pligter', C.G. Styffe (ed.), *Konung Gustaf II Adolfs skrifter* (Stockholm: P.A. Norstedt & Söner, 1861), pp.62–8, on pp.63–4.

[8] *Ibid.*, pp.64–5.



Gustavus Adolphus at the battle of Dirschau, 17-18 August 1627. (Jan Martszen de Jonge, 1634; photo: Medströms)


LAPPLAND
VÄSTERBOTTEN
Torneå
Luleå
Piteå
ÖSTERBOTTEN
Uleåborg
Umeå
Jakobstad
JÄMTLAND
HÄRJEDALEN
ÅNGERMANLAND
FINLAND
KARELIA
Sordevala
MEDELPAD
HÄLSINGLAND
SAVOLAKS
Keksholm
Ladoga
MUSCOVY
NORWAY
Björneborg
SATAKUNDA
TAVASTLAND
DALECARLIA
SWEDEN
Bergen
Falun
GÄSTRIKLAND
Gävle
Tavastehus
Viborg
Åbo
NYLAND
Helsingfors
Nyen
Christiania
VÄRMLAND
Sala
UPPLAND
VÄSTERMANLAND
NÄRKE
Örebro
SÖDERMANLAND
Narva
Reval
Novgorod
DAL
Stockholm
Vadstena
VÄSTERGÖTLAND
ÖSTERGÖTLAND
Norrköping
Pernau
Dorpat
Pskov
BALTIC SEA
Jönköping
Västervik
Gothenburg
SMÅLAND
Gotland
Riga
Kalmar
Öland
Mitau
DENMARK
Copenhagen
POLISH-LITHUANIAN COMMONWEALTH
Königsberg
Stralsund
Danzig
Wismar
Hamburg
National Border -ı-ı-ı-

Map 1. Scandinavia

1

The Wars of Gustavus Adolphus

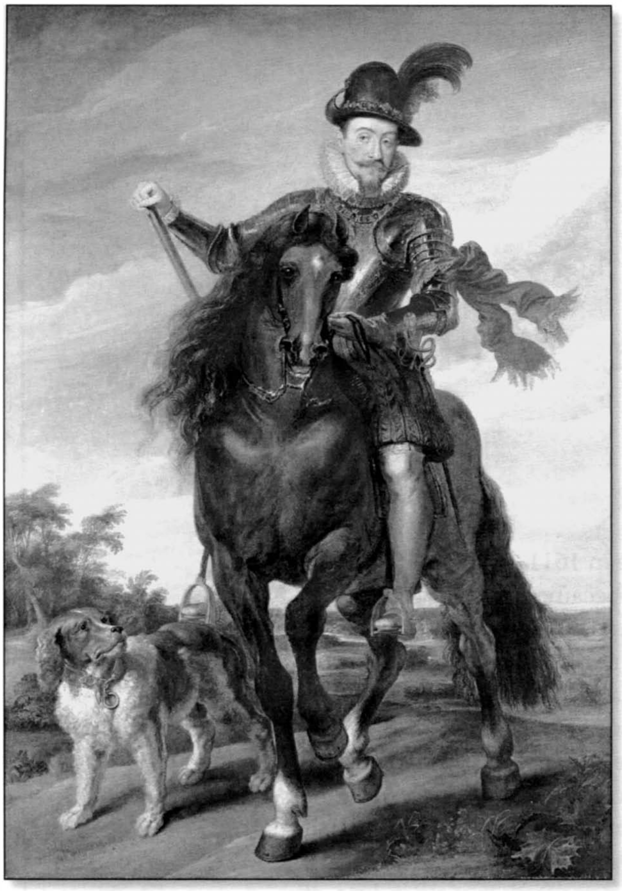
Inherited Conflicts

Gustavus Adolphus inherited the Swedish throne in 1611, at age 16. Earlier in the same year, the Danes invaded Sweden in what became known as the Kalmar War. Soon he had to shoulder military command. The war rapidly proved that Sweden was too poor in men and resources to defend itself effectively on its own territory. The Danes took the port of Kalmar on the Baltic shore in 1611 and, in the following year, Elfsborg, Sweden's gateway to the North Sea. Peace with Denmark was concluded in 1613. Sweden only recovered Elfsborg through the payment of a huge ransom which took six years to raise.

At the same time, Sweden was also still at war with the Polish-Lithuanian Commonwealth. The reason was dynastic. Polish King Sigismund was Gustavus Adolphus' cousin and, moreover, represented the elder line of the Swedish royal house of Vasa. Sigismund still laid claim to the Swedish throne. Sigismund could indeed be said to have a better claim to the throne than his uncle and Gustavus Adolphus's father, Charles IX, who had deposed his nephew ostensibly because of his Catholic beliefs. Charles formally referred to the provisions of the 1560 last will of Gustavus I Vasa, his father, which stipulated that a child who left the Lutheran religion would lose his inheritance. Charles had successfully fought for power over Sweden and had taken control of Finland, both of which he ruled sternly, while Sigismund had to be satisfied with the wealthier but more loosely organised Commonwealth.[1] When Gustavus Adolphus inherited the throne, there was no more than a short-term truce between Sweden and the Commonwealth. Only six years previously, in 1605, a Swedish army had been thoroughly defeated by the Polish winged hussars at Kircholm (modern-day Salaspils) near Riga. This defeat had showed the Swedes that tactics and armament had to be improved to win wars against armoured cavalry armies such as those fielded by the Commonwealth.

---

[1] Sweden and Finland constituted the same country. Its provinces and peoples had the same rights and obligations. Hence, any reference to Swedish soldiers, nobles, and so on, can be assumed also to include those from Finland, unless stated otherwise. By the time of Gustavus Adolphus, Estonia too was part of the Swedish kingdom. Soldiers from these territories were all national troops.



Sigismund, *c.* 1624. (Paul Soutman; Photo: Medströms)

There were other challenges beside the wars with Denmark and the Commonwealth, as if this had not been enough. In the same year, 1611, war also broke out with Muscovy, with which Sweden shared a common border in the north-east. In Muscovy, this was the 'Time of Troubles' (*Smutnoye vremya*, or *Smuta*), the difficult period of Russian history between the death in 1598 of the last tsar of the Rurik Dynasty, Fyodor Ivanovich, and the establishment of the Romanov Dynasty in 1613. During this time, Muscovy suffered from uprisings, usurpers, anarchy, famine, and in 1610 the suppression of a revolt in Moscow by an invited Swedish intervention army under Jacob De la Gardie (1583–1652). The Polish-Lithuanian Commonwealth was the common enemy of both Sweden and Muscovy, but De la Gardie could not prevent the occupation of Moscow by the Commonwealth later in the same year. In desperation, Muscovite representatives offered the crown to several Polish and Swedish princes, including Gustavus Adolphus. Because of the complex negotiations, De la Gardie's Swedish army conquered Novgorod in 1611. Indeed, Novgorod land grants from 1612 show that Gustavus Adolphus by then, briefly, had assumed the title of Tsar, with the support of Moscow.[2] In 1615, he personally went to fight in Muscovy, where he (ultimately unsuccessfully) laid siege to Pskov.

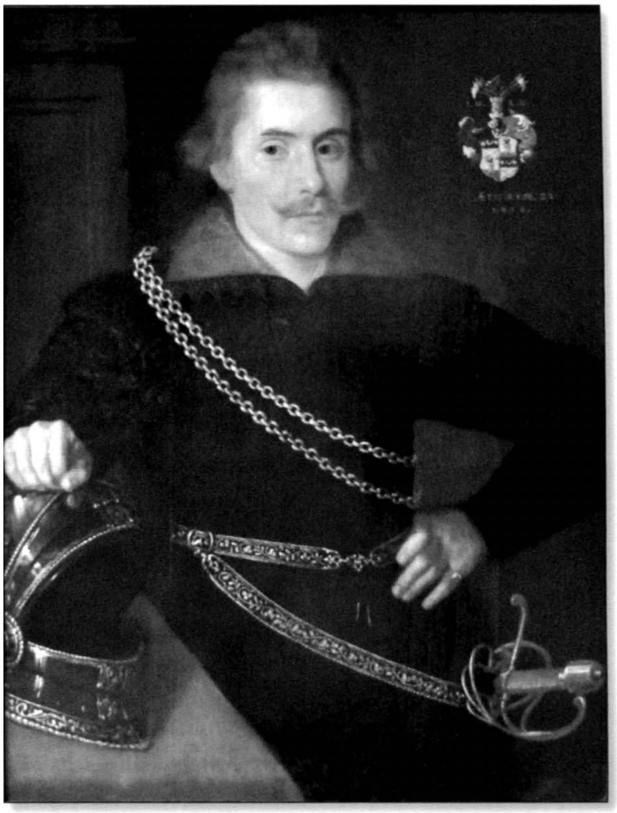
The war with Muscovy ended with the 1617 Peace of Stolbovo, in which Sweden returned Novgorod, received Kexholm (modern-day Korela) County and Ingria, but renounced its claims to the Muscovite throne and recognised Michael Romanov as Tsar. Sweden never got close to reaching its original war objectives under Gustavus Adolphus's father, which were to gain control over Arkhangelsk on the White Sea and the important northern trade route between western Europe and Muscovy through this port.

After the campaigns in Muscovy, Gustavus Adolphus turned his attention to the Polish-Lithuanian Commonwealth. Sweden was interested in acquiring control over the mouths of the major Baltic rivers, and the trade upon them, for financial reasons. Yet more compelling, Sigismund still laid claim to the Swedish throne. Before Gustavus Adolphus's father, Charles IX, had secured Finland, there had been a measure of support for Sigismund there, which Charles had purged without mercy, just like he purged Sigismund's supporters everywhere. Hence, a number of Swedish Catholics had joined Sigismund in the Commonwealth. Sigismund had excellent Catholic credentials. Besides this, he had married into the Habsburg family. Through his marriage to Anne of Austria, Sigismund in time became Emperor Ferdinand II's brother-in-law. Sigismund also made the Commonwealth a centre for Jesuits. Many Swedes suspected, at times correctly, that the Jesuits there constantly plotted against Lutherans. Already in 1612, Gustavus Adolphus had in a letter expressed his concern over the threat that Sigismund would return on the wings of a Catholic invasion army, writing that a Commonwealth army, if it set out from Livonia or Pskov, could reach Viborg in Finland in only a few days. And from Viborg, it would be easy for Sigismund to regain control over Finland, either by promises or threats.[3] The fear of a Commonwealth invasion army continued to haunt Swedish foreign policy until 1632, when both Sigismund and Gustavus Adolphus died.

---

[2] Elisabeth Löfstrand and Laila Nordquist,n*Accounts of an Occupied City: Catalogue of the Novgorod Occupation Archives 1611–1617*, Vol. 2 (Stockholm: Riksarkivet, 2 vols., 2005 and 2009), p.41.

Although the late King Charles IX and his supporters, especially within the Church, had instilled a strong belief in the Swedish population that Sigismund's claim to the throne merely was a Popish plot to reintroduce Catholicism in Sweden, Gustavus Adolphus's distrust of Sigismund, Catholics, and Jesuits was not the result of mere paranoia. Sigismund regularly made preparations for war, taking advantage of Sweden's military operations in Muscovy and, eventually, Gustavus Adolphus's departure from Sweden to join the field army there. Moreover, Sigismund and his supporters regularly sent agents with letters to incite strife in Sweden. In 1613, Sigismund sent a letter to Jacob De la Gardie in Novgorod, inviting him to join Sigismund's faction. De la Gardie immediately forwarded the letter to the Swedish Chancellor, Axel Oxenstierna, so as not to be suspected of treason. By 1615, at least one more such letter, to the Bishop of Strängnäs, a town in the Swedish heartland, ended up in the hands of Oxenstierna. Sigismund's men also recruited as an agent Henricus Petri Hammerus, the son of a Swedish mayor. In 1616, a letter from Sigismund was even sent to Gustavus Adolphus's cousin John (1598–1618), Duke of Östergötland, who upon receipt handed it over to Gustavus Adolphus, unread. In early 1617, Hammerus carried two letters to Sweden. One was concealed in the shaft of a knife. The other, an enciphered letter destined for an existing agent in Sweden, was hidden in a sheep's leg bone which subsequently was buried



Jacob De la Gardie, 1606. (Photo: Medströms) under a particular pine tree in a cemetery where the recipient was supposed to retrieve it (in twentieth-century intelligence tradecraft, this procedure would be referred to as a dead-letter drop). Hammerus was arrested and sentenced to death for treason, but not before he had revealed that he had been authorised to tell Sigismund's Swedish supporters that a Commonwealth army would attack Sweden in the spring of 1617. There would be naval landings in Stockholm and Kalmar, he said, together with a simultaneous invasion of Estonia and Finland from the east.[4]

---

[3] Mirkka Lappalainen, *Det nordiska lejonet: Gustav II Adolf och Finland 1611–1632* (np: Fischer & Co, 2016), p.61.

The plans sounded credible. News from Danzig mentioned preparations for war. The then Emperor Matthias had permitted Sigismund to have one of his Swedish Catholics, Gustav Sparre (1582–1629), enlist soldiers within the Empire for an invasion of Sweden, and Sigismund had demanded that Lübeck supply an invasion fleet. Spain, too, promised to support the coming war with 6,000 men and a fleet of ships and indeed requested permission from Denmark to move the fleet through Danish waters. In response, Sweden prepared its defences. However, the troops enlisted in the Empire never arrived, since the Emperor suddenly needed them in Silesia and Bohemia. Oxenstierna had his own agents in the Commonwealth, so he presumably knew that the invasion threat, although real enough, was unlikely to materialise; however, he could hardly ignore the persistent pattern of Commonwealth plots against Gustavus Adolphus. Nor could the Swedish King, who was the direct target of the plots. The next winter, it was again suspected that the Commonwealth forces would cross the ice of the Gulf of Finland to invade the province of Nyland. In response, military forces were deployed to Helsingfors (modern-day Helsinki).[5]

An Obsolete Army

The existing Swedish army was obsolete and insufficient with regard to both manpower and armament. In the previous century, the core of the Swedish army had been a handful of armed and fully armoured cavalry, financed and raised by the nobility and leading members of the church in exchange for their status as exempt from taxation. First instituted in (probably) 1280, when members of the nobility agreed to provide a force of armoured cavalry from their retainers when called to arms, this was the oldest unit in the Swedish army. Since 1571, it had been known as the retinue of nobles (*riddarskapets russtiänst*; *adelsfanan*). However, the retinue of nobles was weak in numbers, consisting only of a few hundred men, and most Swedish cavalry served as unarmoured harquebusiers.

---

[4] Axel Norberg, *Polen i svensk politik 1617-26* (Stockholm: Stockholm University, dissertation, 1974), p.34; Stefan Östergren, *Sigismund: En biografi över den svensk-polske monarken*(np: Fredestad, 2005), p.175; Lappalainen, *Det nordiska lejonet*, pp.160–63; citing archival sources and Oskar Garstein, *Rome and the Counter-reformation in Scandinavia* 2: *Until the Establishment of the S. Congregatio de Propaganda Fide in 1622* (Oslo: Universitetsforlaget, 1980), pp.392–9.

[5] Norberg, *Polen*, pp.40–41; Östergren, *Sigismund*, pp.173, 181; Lappalainen, *Det nordiska lejonet*, pp.160–63, 186.

To complement the small cavalry force, the Crown hired Swedish and foreign mercenaries, both foot and horse, according to need and financial resources. In particular German Landsknechts were popular. However, with royal finances generally being poor, the Crown also levied peasants to fill up the ranks.

A severe peasant uprising in the years 1541–1543 in the provinces of Småland and Östergötland, led by local strongman Nils Dacke, showed King Gustavus I that it was necessary to take a firm grip of the rural areas. However, the uprising also showed the fighting potential of the peasants against the Crown's Landsknechts. As a result, the Crown already in 1543 began to raise (at first, by voluntary enlistment) unmarried peasants for service in a national army, the formation of which was approved by parliament in the following year (1544). Most of the men were raised from the very four provinces that had been most prone to uprisings: Småland, Dalecarlia, Västergötland, and Östergötland. In times of peace, most soldiers lived in the provinces, engaged in farming. Those who were unable to make such a living served in garrisons or were lodged in royal castles, towns, or with the clergy.[6]

Although King Erik XIV (r. 1560–1568), who was at war with Denmark and what then was the united Kingdom of Poland and Grand Duchy of Lithuania, attempted to reform the military establishment by introducing armoured pikemen and the Spanish model of warfare (more on which below), his brother and successor John III (r. 1568–1592), who deposed Erik, cancelled the reforms and instead focused on unarmoured arquebusiers both as foot and horse. Later historians have explained this as the need to appease the former King's soldiers, who disliked wearing heavy armour and carrying an unwieldy and heavy pike.[7] It has also been suggested that the new doctrine focused on defending forested areas, for which unarmoured arquebusiers were more suitable.[8] Yet, a more compelling reason might be the change of focus in theatre of operations. John III's only real adversary was Muscovy, and he may have perceived unarmoured arquebusiers as more efficient when fighting Muscovite cavalry, which by then primarily consisted of mounted archers.[9] His field commander on the eastern front, Gustav Banér (1547–1600), who had been in foreign military service, disagreed, but to no avail.[10] Yet, late in the reign of John III production of pikes and cuirasses resumed.[11] John III's brother and eventual successor Charles IX (r. 1604–

---

[6] Gustaf Petri, *Kungl. Första livgrenadjärregementets historia 1: Östgötafänikorna till och med år 1618* (Stockholm: P.A. Norstedt & Söner, 1926), p.65.

[7] *Ibid.*, pp.201–2.

[8] Bertil C:son Barkman, *Kungl. Svea livgardes historia* 2: *1560–1611* (Stockholm: Stiftelsen för Svea livgardes historia, 1939), pp.201–2.

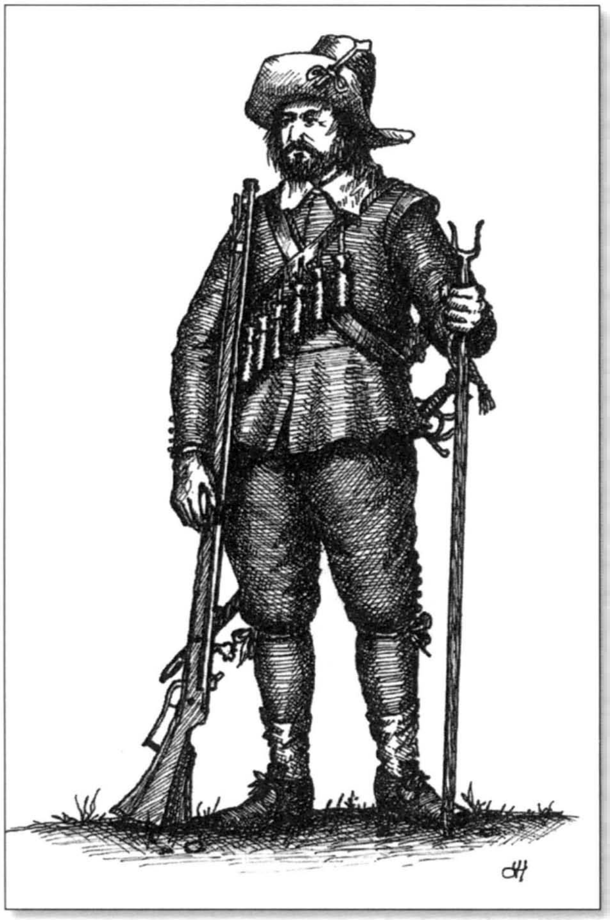
[9] This explanation was never explored by post-eighteenth century Swedish historians, who almost universally entertained the notion that Muscovite armies were so inferior in quality that there was no need for either tactical or technical modernisation to defeat them. See, for example, Petri, *Kungl. Första livgrenadjärregementets historia* 1, p.206; *Kungl. Svea livgardes historia* 2, p.204. In reality, the Swedes were hard pressed in Estonia and eastern Finland for years before they could go on the offensive, and a sustainable peace was only accomplished in 1617 under Gustavus Adolphus, which would seem to disprove this facile assumption.

[10] In 1572, Banér requested 4,000 pikeheads and 6,000 pike staffs. Petri, *Kungl. Första livgrenadjärregementets historia* 1, p.209.

[11] *Kungl. Svea livgardes historia* 2, p.207.

1611) ordered the reintroduction of pikemen and halberdiers among the infantry and shot-proof cuirasses among the harquebusiers, in addition to mobile defences such as the use of a wagenburg and, upon the initiative of the Dutch expert John of Nassau, carts with affixed pikes (Swedish: *spetskärror*) that might provide a modicum of protection against enemy cavalry, but he did not succeed in reversing this course, despite himself being at war with the Polish-Lithuanian Commonwealth.[12]

Moreover, John III and Charles IX introduced a money-saving measure, the land grant. As always, it was difficult for the Crown to raise enough cash to pay for its troops. As a result, the officers of the national army were provided, as part of their salary, with tax-exempted Crown land to farm (farmsteads subsequently known as 'military homesteads', *militiehemman*), of a size appropriate to the rank held. Alternatively, the officer received the appropriate rent corresponding to the tax owed, while the farmstead remained in private hands. In 1611, Charles IX ordered that officers and under-officers would continue to be paid according to this system. Moreover, he also ordered that those common soldiers of the national army who did not yet have any tax exempted land should be provided a small farm. Gustavus Adolphus issued the corresponding instruction in 1614.[13] The decision to establish a national army in part paid for with land grants was taken, since such an army was cheaper to raise and maintain and because it enabled a degree of domestic control. Johan III raised cavalry by this means, and Charles IX extended the practice to the infantry. This cut costs but did not make the army more efficient.



Swedish musketeer. (Tommy Hellman)

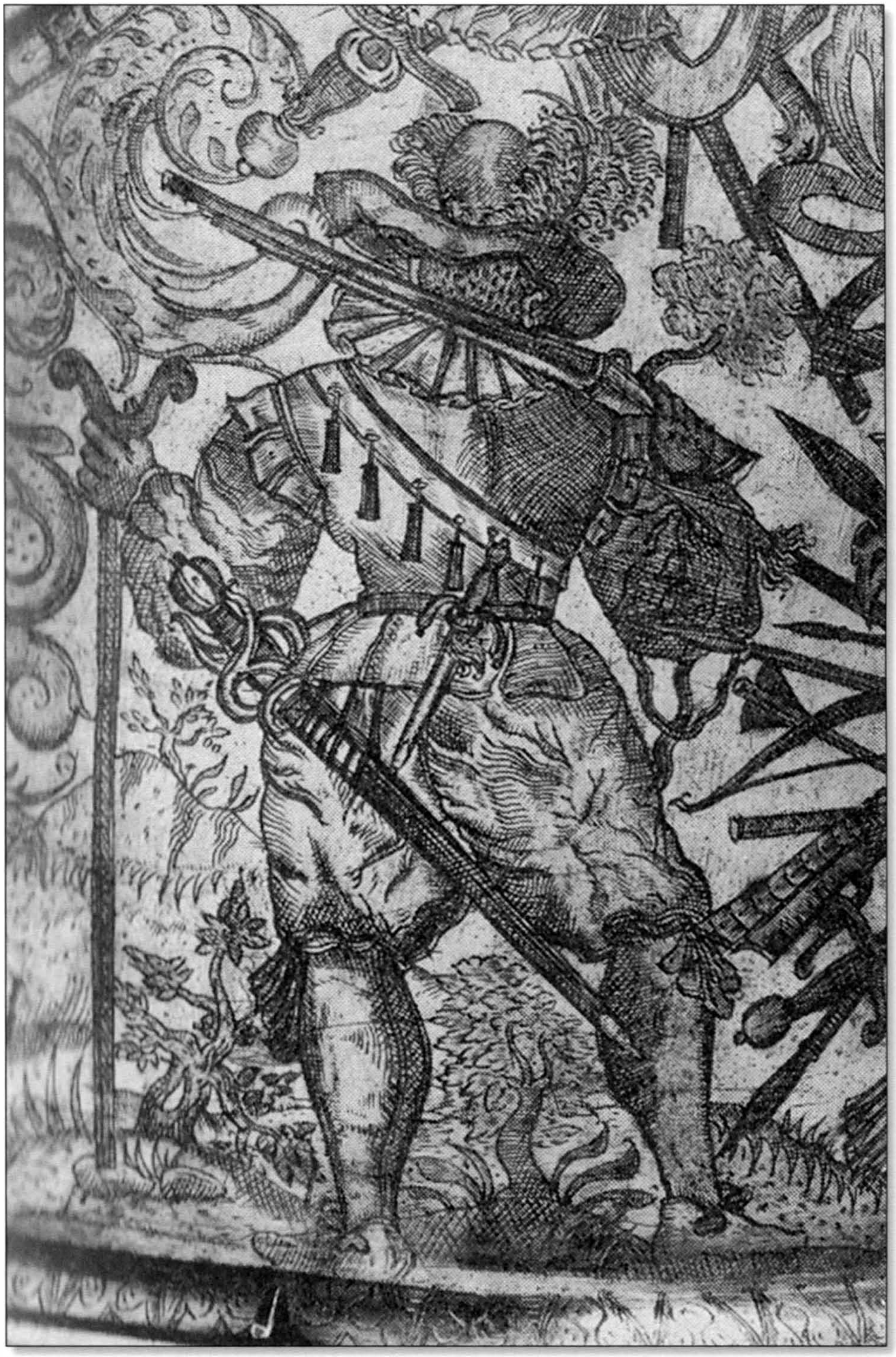
One of Gustavus Adolphus's first tasks accordingly became to reform the Swedish military establishment. This was a key task to ensure his and his dynasty's right to the Swedish Crown in the face of opposition from Polish King Sigismund, which was no easy matter. The ongoing wars that he inherited at first allowed little time for reform. Time finally became available only with the end of the war with Muscovy in 1617. Gustavus Adolphus needed to modernise the army's organisation and tactics, but he also needed to modernise its arms and equipment, which demanded substantial imports

---

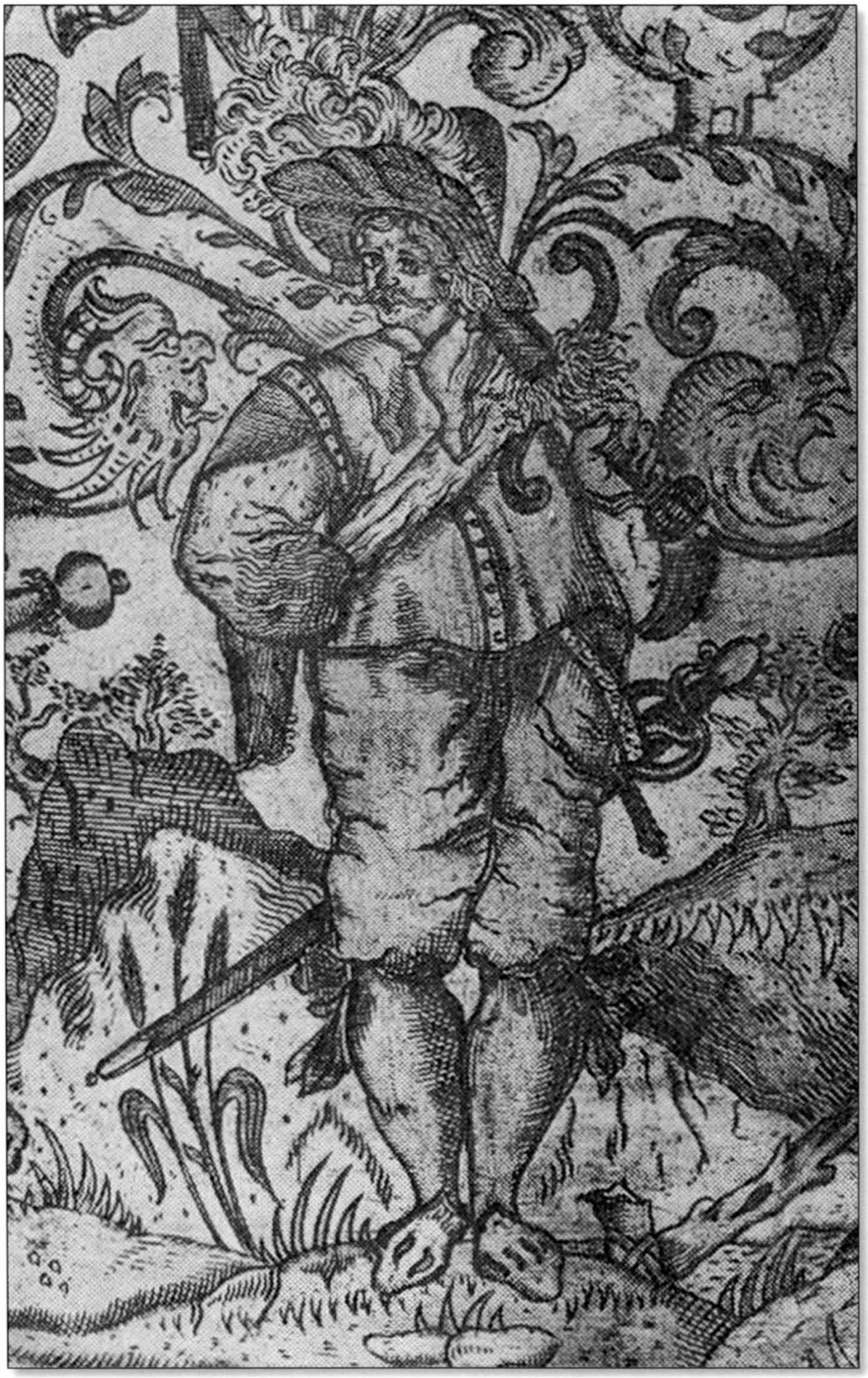
[12] Theodor Jakobsson, *Lantmilitär beväpning och beklädnad under äldre Vasatiden och Gustav II Adolfs tid* (Stockholm: Generalstaben, 1938), pp.14, 20.

[13] Henning Hamilton, *Afhandling om krigsmaktens och krigskonstens tillstånd i Sverige, under Konung Gustaf II Adolfs regering* (Stockholm: Kongl. Vitterhets Historie och Antiquitets Academiens handlingar 17, 1846), pp.143–5, 147–50.

Musketeer, 1611. The jacket has several short tails and shoulder straps divided into tongues. Sleeves and breeches are fairly wide. The hat is decorated with tall plumes. The collar is flat and semi-wide. Charles IX's funeral armour, made in Stockholm in 1611. (Strängnäs Cathedral).



Soldier with ceremonial two-handed sword, 1611. The jacket is buttoned all the way down and has protruding shoulder straps. Sleeves are slit, and breeches are fairly narrow. The linen collar has elongated tips. Charles IX's funeral armour, made in Stockholm in 1611. (Strängnäs Cathedral).



which Sweden could hardly afford. The answer then became to establish a domestic arms industry, ensure the import of necessary raw materials, and preferably simultaneously, raise a modern army. There was also the need to reform the economy so as to enable the establishment of an arms industry in the first place. Gustavus Adolphus and Oxenstierna accordingly sought to apply a three-pronged model to Sweden: the Crown would provide security throughout the realm through a modern army; this secure environment would enable modernisation, which he interpreted as the introduction of a functioning administration and modern industry, including an arms industry; and the private and throne-supported economic initiatives inherent in modernisation would enable the economic reform necessary to pay for the costs of building security. The three concepts – security, modernisation, and economic reform – were interlinked. Gustavus Adolphus understood that to succeed, he could not have one without the others.

Over time, Gustavus Adolphus was successful. Under his rule, Sweden developed its natural resources, established new manufactures, ended the commercial isolationism of most of his predecessors, and created an economy that could sustain Gustavus Adolphus's security and foreign policy.

But at the outset, there was a serious problem, which might have killed the modernisation process before it got underway. Gustavus Adolphus did not have the economic resources to begin the process. The Kalmar War had shown that Sweden could not support its own army on Swedish territory. For this, he needed financial subsidies from abroad, to move the army abroad to live off another monarch's territory, or both. Abroad, he could raise money by the then prevailing system of asking for contributions. A contribution (German: *Kontribution*) was an impost in money or kind, levied under the threat of force. The concept seems to have derived from, and absorbed elements of, the old custom of demanding money to ransom property which under then prevailing law of war could be looted or burned (*Brandschatzung*).[14]

Foreign subsidies being unavailable, and with the Swedish Crown already at war with Sigismund, Gustavus Adolphus chose to move his army overseas, into enemy territory.

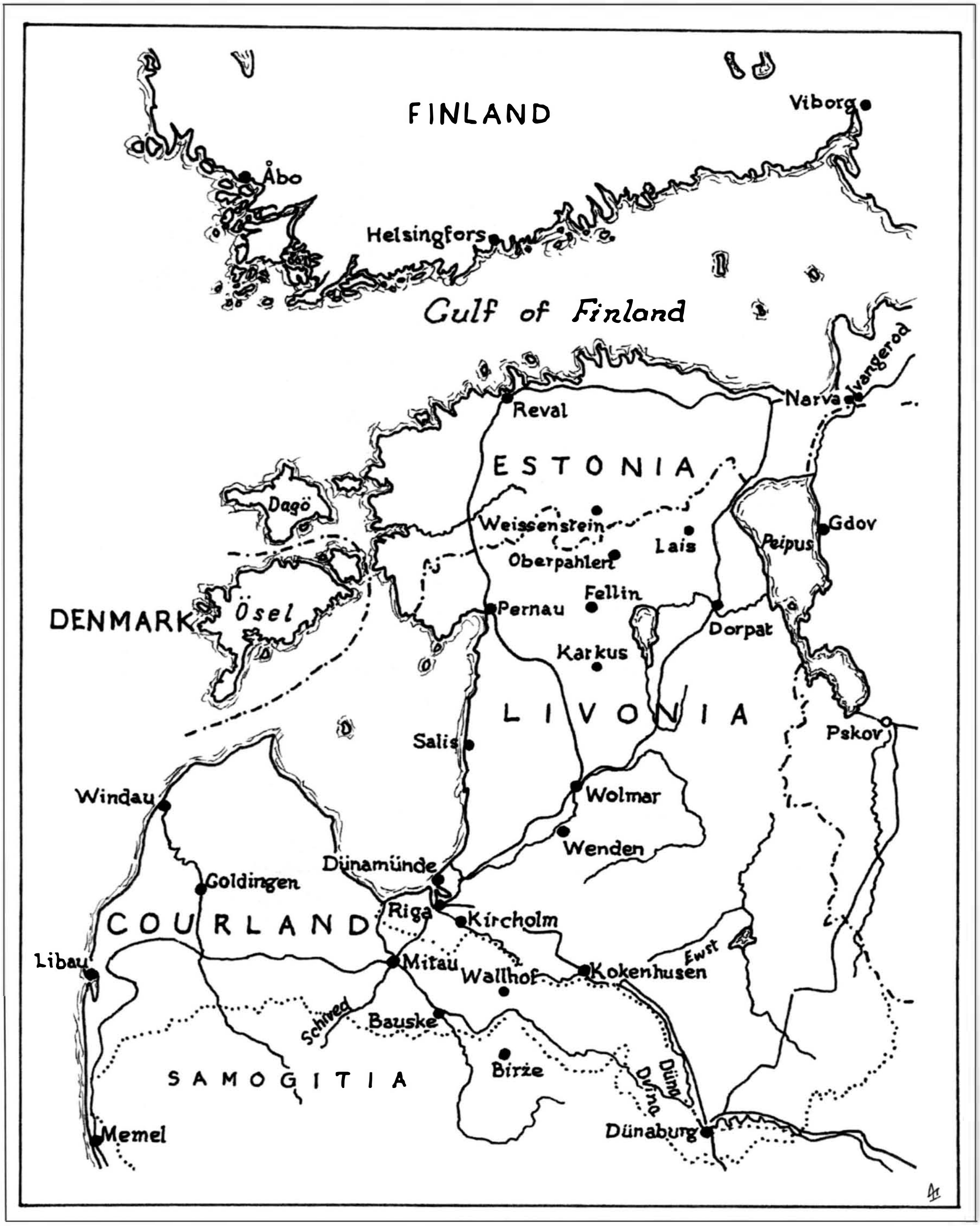
The Invasion of Livonia

For this endeavour, Gustavus Adolphus chose Nils Stiernskiöld (1583–1627). The reform of the national army had barely begun, so only enlisted troops would be used. Few were available in Sweden. Stiernskiöld accordingly went to the Dutch Republic, where he in 1617 enlisted a regiment of 1,200 men, divided into six companies of foot.[15] The Dutch regiment would together with the Commanding General's Regiment (*Fältherrens regemente*; that is, Jacob De la Gardie's Regiment) and three independent companies, which

---

[14] F. Redlich, 'Contributions in the Thirty Years' War', *Economic History Review*, New Series 12:2 (1959), pp.247–254.

[15] Hamilton, *Afhandling*, p.99.


FINLAND
Viborg
Åbo
Helsingfors
Gulf of Finland
Ivangerod
Narva
Reval
ESTONIA
Dagö
Weissenstein
Lais
Oberpahlen
Gdov
Peipus
DENMARK
Ösel
Pernau
Fellin
Dorpat
Karkus
LIVONIA
Pskov
Salis
Windau
Wolmar
Wenden
Dünamünde
Goldingen
COURLAND
Riga
Kircholm
Ewst
Libau
Mitau
Wallhof
Kokenhusen
Schived
Bauske
SAMOGITIA
Birże
Düna
Dvina
Memel
Dünaburg

Map 2. Estonia and Livonia

Nils Stiernskiöld, 1617. (Epitaph, Gillberga Church, Södermanland)

already were in Sweden, form an expeditionary force. In total, it would consist of at most 3,700 man, all infantry.[16]

The invasion plan was modest and depended on treachery. Already in the winter of 2015–2016, Wolmar Farensbach (1586–1633), the Commonwealth commandant of Dünamünde (modern-day Daugavgrīva), had offered to surrender his stronghold to the Swedish army.[17] Dünamünde was close to Livonia's key town, Riga, which with some 30,000 inhabitants was larger than Stockholm (which in the mid 1620s had no more than 15,000 to 20,000 inhabitants[18]). Riga was also the Commonwealth's second most important port and was linked by road to Pskov. The town accordingly played a key role in the trade with Muscovy, over which Sweden hoped to gain control. As for Farensbach, he had a mercenary streak in him. He was the son of Jürgen Farensbach who in the previous century had been in Muscovite service and in 1572 distinguished himself in the battle of Molodi against the Crimean Tatars.[19] Like his father, the younger Farensbach frequently changed allegiance according to the fortunes of war – a strategy that worked for a considerable time (although, unlike his father, the younger Farensbach ultimately was executed for changing sides one time too many). Now Gustavus Adolphus's agents made secret arrangements with him.

Three days after the negotiations for a continued truce with the Commonwealth had collapsed, on 19 June 1617, the first Swedish squadron of four warships arrived off the Livonian coast. Farensbach duly surrendered Dünamünde. A somewhat larger Swedish fleet, under Stiernskiöld, reached Windau (modern-day Ventspils) on 23 July and Dünamünde on 1 August. However, Riga was too strongly defended, so Stiernskiöld and Farensbach found it safer to continue to the important port of Pernau (modern-day Pärnu), near Swedish-held Estonia. Stiernskiöld landed there on 10 August. There his small expeditionary corps (which with troops left in Dünamünde and due to the usual attrition had shrunk to less than 2,000 men) disembarked,

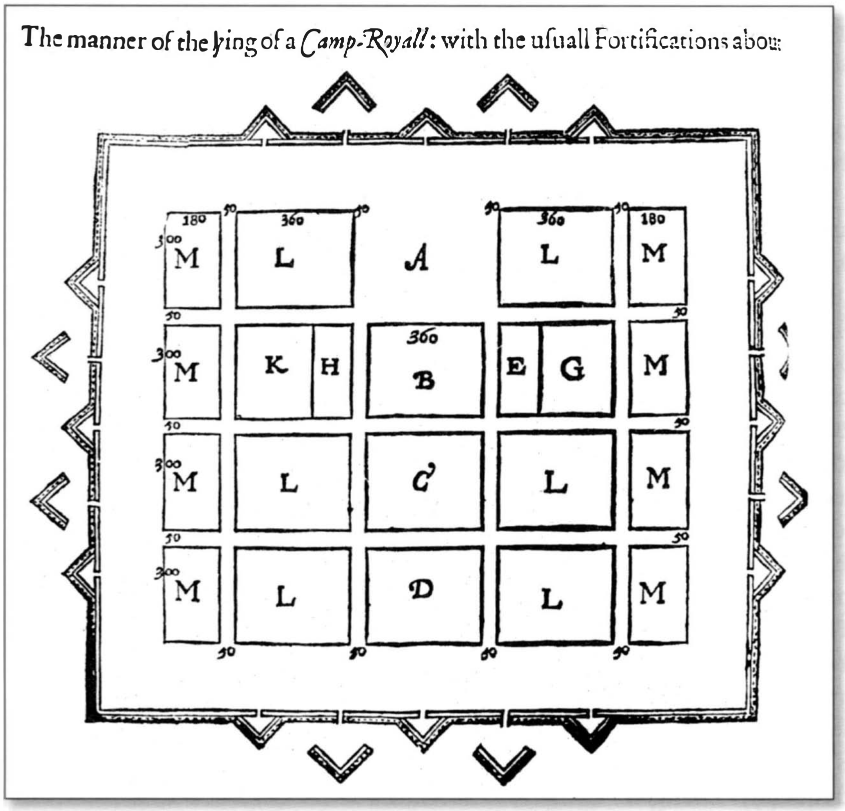
---

[16] G. Bertil C:son Barkman and Sven Lundkvist, *Kungl. Svea livgardes historia* 3:1: *1611–1632* (Stockholm: Stiftelsen för Svea livgardes historia, 1963), pp.247–8.

[17] Norberg, *Polen*, pp.36–7.

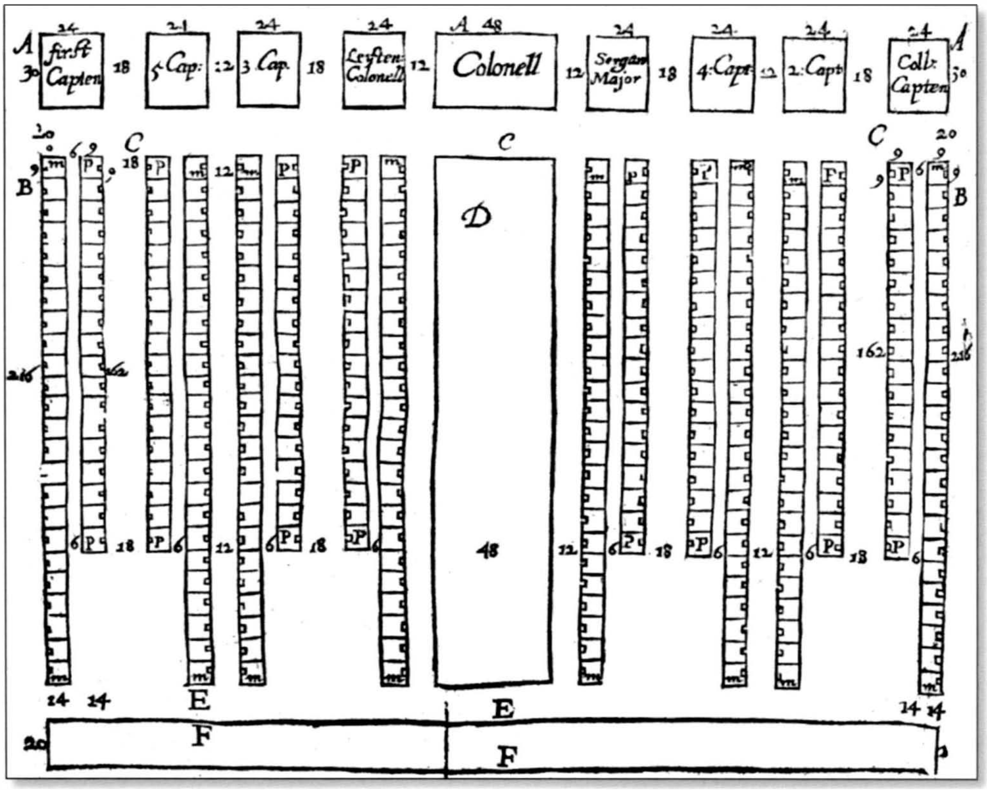
[18] Lars Ericson, *Krig och krigsmakt under svensk stormaktstid* (Lund: Historiska Media, 2004), p73. First published in 1987. The number of inhabitants is far from certain, and the common previous estimate for this period was 10,000. Gösta Selling, 'Stormaktens huvudstad', Stig Hadenius et al. (eds), *Historia kring Stockholm* (Stockholm: Wahlström & Widstrand, 1982), pp.232–51, on p.234. First published in 1950. The population of Stockholm grew rapidly only from the 1630s onwards.

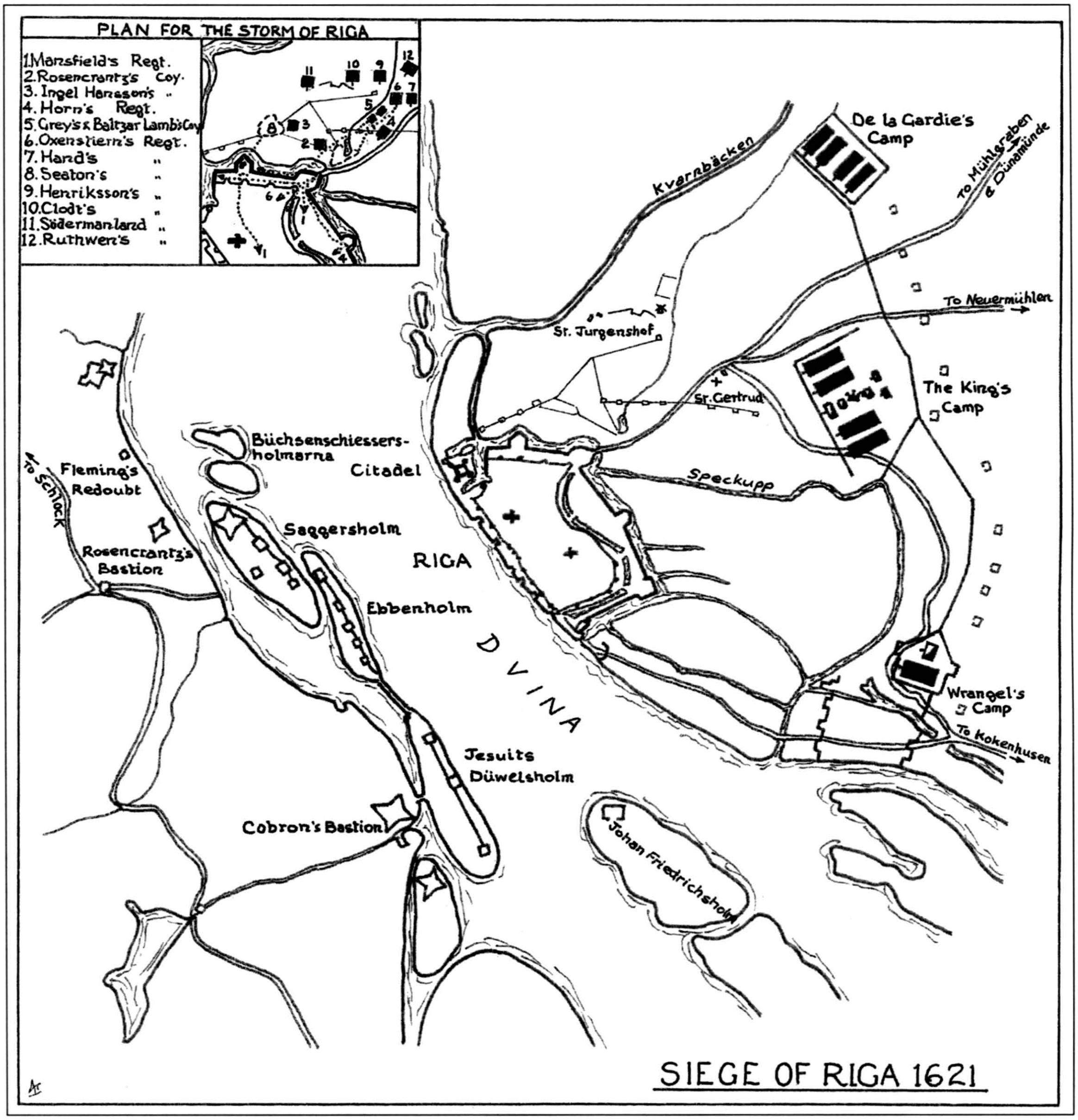
[19] Michael Fredholm von Essen, *Muscovy's Soldiers: The Emergence of the Russian Army 1462–1689* (Warwick: Helion, 2018), pp.64–7.


The manner of the lying of a Camp-Royall: with the usuall Fortifications about
180
360
300
50
M
L
A
K
H
B
E
G
C
D

Left: Swedish fortified field army camp, as described by Colonel Donald Mackay (Lord Reay). The layout of the camp corresponds to what is known from other Swedish camps, including the one at Årsta south of Stockholm from which Gustavus Adolphus prepared his 1621 invasion of Livonia. (***Swedish Discipline; Kungl. Svealivgardeshistoria*** 3:1, p.330).

Below: Swedish regimental camp, as described by Colonel Donald Mackay (Lord Reay). (***Swedish Discipline***)


A
24
first Capten
5 Cap:
3 Cap.
Leften: Colonell
Colonell
48
Sergan Major
4 Capt
2 Capt
Coll: Capten
30
18
12
B
C
D
E
F
P
m
20
9
6
216
162
14


PLAN FOR THE STORM OF RIGA
1.Mansfield's Regt.
2.Rosencrantz's Coy.
3. Ingel Hansson's "
4. Horn's Regt.
5. Grey's & Baltzar Lamb's Coy
6.Oxenstiern's Regt.
7. Hand's "
8. Seaton's "
9. Henriksson's "
10.Clodt's "
11.Södermanland "
12.Ruthwen's "
De la Gardie's Camp
To Mühlgraben & Dünamünde
Kvarnbäcken
To Neuermühlen
St. Jurgenshof
St. Gertrud
The King's Camp
Speckupp
Büchsenschiessers-holmarna
Citadel
To Schlock
Fleming's Redoubt
Rosencrantz's Bastion
Saggersholm
RIGA
Ebbenholm
DVINA
Wrangel's Camp
To Kokenhusen
Jesuits Düwelsholm
Cobron's Bastion
Johan Friedrichsholm
SIEGE OF RIGA 1621
Ar

Map 3. Riga

after which it took the town. Then little happened for some time, until Farensbach, dissatisfied with the developments, returned to Sigismund's side, bringing Dünamünde with him.[20]

Hostilities continued into 1618. However, neither Sweden nor the Commonwealth was able to concentrate fully on Livonia, so negotiations got underway. In November 1618, the first of a new series of short truces between Sweden and the Commonwealth was concluded. Gustavus Adolphus retained Pernau.

The Siege of Riga

In 1621, after negotiations for a more enduring 10-year truce had failed, Gustavus Adolphus resumed the war against Sigismund. At the time, the Commonwealth was involved in a conflict with the Ottoman Empire over Moldavia. Besides, Gustavus Adolphus's reform process was well underway and he had also introduced new weapons and tactics (more on which below). As a result, a modern army, based on the Dutch model, was ready for deployment. On 3 August, Gustavus Adolphus set out across the Baltic Sea with a field army of nine regiments of infantry and some 11 companies of horse in addition to artillery, embarked on a fleet consisting of 25 warships, some 17 smaller ships, and 106 transport ships.[21] In addition, Jacob De la Gardie, by then Grand Marshal of the Realm (Swedish: *riksmarsk*),brought five regiments of infantry and nine companies of cavalry from Finland, together with the Estonian retinue of nobles and four enlisted cavalry companies previously in Estonia.[22]

Although the fleet was dispersed by storms, Gustavus Adolphus successfully landed in Pernau on 7 August and proceeded by road to Riga, near which the rest of his army was gathering, including the troops brought by De la Gardie. With the troops already in the theatre and from Finland, Gustavus Adolphus now led a field army of 17,850 men (14,700 foot and 3,150 horse).[23] This was the largest Swedish army ever brought overseas. Although a few units had to be deployed elsewhere, most were positioned to lay siege to Riga. On 21 August, when Gustavus Adolphus personally inspected Riga's defences, his army there consisted of 15,350 foot, 2,500 horse, and a strong artillery consisting of 56 cannons (including 13 forty-eight-pounders, 2 thirty-six-pounders, and 16 twenty-four-pounders), four mortars, and six petards.[24]

---

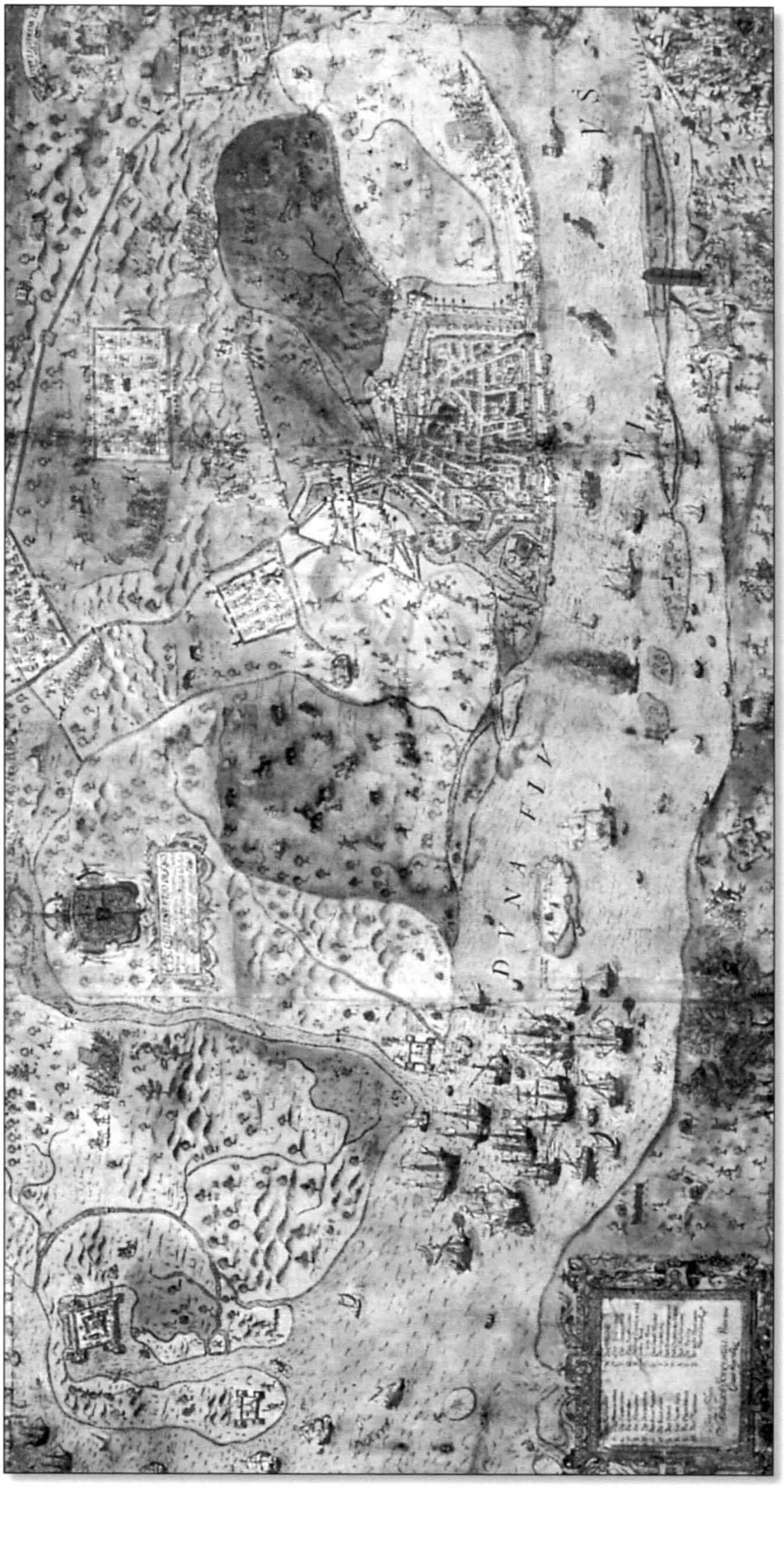
[20] *Kungl. Svea livgardes historia* 3:1, pp.247–58. On the naval operation, see Generalstaben, *Sveriges krig 1611–1632* (Stockholm: Generalstaben, 1936–1939), Suppl. Vol. 1, pp.133–6.

[21] *Sveriges krig*, Suppl. Vol. 1, p.139.

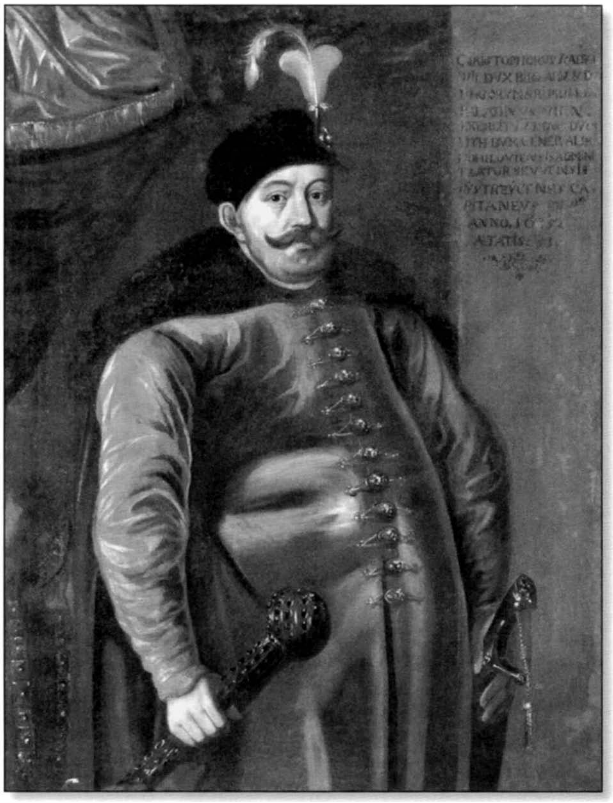
[22] *Sveriges krig* 2, p.67.

[23] *Kungl. Svea livgardes historia* 3:1, 333. On the naval operation, see *Sveriges krig*, Suppl. Vol. 1, pp.139–42, 256–7.

[24] *Sveriges krig* 2, pp.75–6; Jonas Hedberg (ed.), *Kungl. Artilleriet: Yngre vasatiden*(Stockholm: Militärhistoriska Förlaget, 1985), p.201; Hans Ulfhielm and Eric Granefelt (eds), *Kungl. Artilleriet: Svenska Artilleriet i Östersjöprovinserna 1561–1721* (np: Militärhistoriska Förlaget, 2005), p.163.



Naval assault and siege of Riga, 1621. (Georg von Schwengeln; photo: Medströms)



Krzysztof Radziwiłł.

Riga was only defended by some 400 enlisted soldiers and 3,700 burgher militia, although the port had a strong artillery, consisting of some 40 cannons.[25] The town surrendered on 25 September after a month-long siege, during which Gustavus Adolphus tried out all the new siege techniques such as creeping barrages, total exclusion zones, tunnelling, mines, and so on that he had studied – the first time ever that a Swedish army used such methods with success.[26] One of the Swedish officers at the siege of Riga was Gustav Horn (1592–1657), commander of the Norrland regiment, who during the siege was seriously wounded. Horn would within a few years become one of the most trusted officers of Gustavus Adolphus. Horn came from a distinguished family; his elder brother, Field Marshal Evert Horn, had fallen while the King laid siege to Pskov. Horn had served since 1612, first under his brother, then in Dutch service.

Following Riga's surrender, Gustavus Adolphus gradually assumed control over most of Livonia. By the end of the year, he crossed the River Dvina (Düna; modern-day Daugava) and moved his army further south, into Courland, where he in October took the capital Mitau (modern-day Jelgava). Courland, a vassal state to the Commonwealth, was ruled by Frederic Kettler (1569–1642), Duke of Courland and Semigallia.

Although the field army remained overseas, Gustavus Adolphus returned to Stockholm over the winter so as to attend other matters of state (and he continued to do so throughout the campaigns in the Commonwealth). Gustavus Adolphus did not think that he had achieved all that he had set out to do, and although the Commonwealth resistance had been limited, he had faced shortages in money, supplies, and in particular cavalry.[27] In early 1622, Field Hetman of the Grand Duchy of Lithuania, Krzysztof Radziwiłł (1585–1640; Lithuanian: Kristupas Radvila) took advantage of the King's absence. Radziwiłł laid siege to Mitau, which he retook in the summer. Soon after, Gustavus Adolphus arrived with reinforcements. In total, Gustavus Adolphus in 1622 had at his disposal in Livonia some 12,000 men.[28] He had also worked to improve his cavalry, including by authorising a number of officers to enlist cuirassier companies (more on which below).[29] However, despite his efforts, he now had fewer men available than in the previous year. Besides, Radziwiłł had fortified Mitau to such an extent that no assault was possible. As a result, a new truce was negotiated. Eventually extended, it lasted into 1625.

---

[25] Hedberg, *Kungl. Artilleriet*, pp.201–2.

[26] Hans Ulfhielm and Eric Granefelt (eds), *Kungl. Artilleriet: Svenska Artilleriet i Östersjöprovinserna 1561–1721* (np: Militärhistoriska Förlaget, 2005), p.163. On map sources for the siege of Riga, see *Kungl. Svea livgardes historia* 3:1, pp.756–61. A recent history of the siege of Riga is Lars Ericson, 'Riga [illegible]

[27] Norberg, *Polen*, pp.128–9. Norberg also refers to Polish sources, unlike many Swedish works on the war.

The Foreign Invasion Threat

In spring 1623, while the truce still held, Gustavus Adolphus received reports that Sigismund had arrived with in Danzig with a strong army, well-supplied with arms and provisions, where he had also reportedly built a new fleet, with the intention of launching an invasion of Sweden. There was some truth in the reports; Sigismund had contracted with a Scotsman to enlist at least 8,000 men for a 1624 invasion of the Swedish west coast, and he commandeered merchant ships and also ordered the construction of a new fleet. There were also reports that Sigismund enlisted additional men in Germany.[30] Moreover, his agents continued to spread rumours in Sweden about Sigismund's imminent return. Experienced officers such as Jacob De la Gardie assessed that Sigismund did not have the resources for waging war, yet the intelligence was deemed sufficiently credible to order a spring mobilisation in parts of Sweden and Finland, prepare and repair border defences (Elfsborg Castle in the west, Jönköping and Kalmar in the south, Borgholm Castle on the island of Öland, the southern border of Estonia, and the shore of Finland) including the preparation of a supply of fireships along the Finnish coast.[31] Moreover, in the summer of 1623 Gustavus Adolphus personally led a Swedish fleet of 20 warships and three smaller vessels to Danzig to pre-empt Sigismund.[32] However, it turned out that the intelligence from the Commonwealth had been faulty, after all; Sigismund did not have the resources to mount an invasion, nor did he have the necessary support from the Commonwealth nobility.[33]

In 1624, the concern that Sigismund might send an invasion fleet was replaced by an equally serious concern that Denmark might invade from the south. On 12 April 1624, Gustavus Adolphus ordered the mobilisation of 16 infantry field regiments in preparation for a Danish attack. In fact, he first planned for 18 field regiments, but this plan could not be carried out because of mutinies in Småland on the Danish border, which were soon suppressed, and the fact that the ongoing conscription effort was not expected to be concluded before the end of May. Six field regiments would be deployed to Stockholm, one to Nyköping, one to Johannisborg (at Norrköping), three to Kalmar, three to Gothenburg (a port town in the west re-established by Gustavus Adolphus in 1619, with privileges dated 1621), and two to Reval (modern-day Tallinn). The plan was carried out in its essentials. As before, the infantry regiments focused on defending important port towns. However, no war broke out, and orders to demobilise most units were issued in July.[34]

---

[28] G.B. C:son Barkman, *Gustaf II Adolfs regementsorganisation vid det inhemska infanteriet: En studie över organisationens tillkomst och huvuddragen av dess utveckling mot bakgrunden av kontinental organisation* (Stockholm: Meddelanden från Generalstabens krigshistoriska avdelning, 1931), pp.141–2; Ericson, *Krig och krigsmakt*, p.112.

[29] Norberg, *Polen*, pp.146–7.

[30] *Sveriges krig* 2, pp.142–4. The copy of the contract between Sigismund and the Scotsman, Colonel Robert Stuart, in the Swedish National Archives (RA) says 8,000 to 10,000 men. See also Norberg, *Polen*, pp.175, 200. On Robert Stuart, see Steve Murdoch and Alexia Grosjean, The Scotland, Scandinavia and Northern European Biographical Database <https://www.st-andrews.ac.uk/history/ssne/item.php?id=529>.

[31] *Sveriges krig* 2, pp.144–8; Norberg, *Polen*, pp.177–8.

[32] *Sveriges krig* 2, pp.150–4; *Sveriges krig*, Suppl. Vol. 1, pp.149–52, 258–9; Norberg, *Polen*, pp.178–81.

[33] Norberg, *Polen*, pp.199–200; Östergren, *Sigismund*, 184–7; Lappalainen, *Det nordiska lejonet*, pp.174–5.

The Battle of Wallhof

In 1625, the truce with the Commonwealth ended, while Denmark, due to its entry into the war on the Continent, no longer posed an invasion threat. As a result, Gustavus Adolphus in July 1625 brought a new field army from Sweden across the Baltic to Livonia. Troops were also sent from Finland. Total Swedish forces in the region then consisted of some 20,000 man, or half the total available throughout the realm. Excluding the garrison troops in Estonia and Livonia, the field army consisted of 15,350, of which a third came from Finland (and they arrived only a month after the campaign began).[35] Gustavus Adolphus split the army into two main expeditionary forces. He led the main force, some 9,000 men, to Kokenhusen (modern-day Koknese), which fell on 25 July.[36] Then he continued into Courland where Birze (modern-day Biržai) surrendered on 5 September. Meanwhile, Jacob De la Gardie and Gustav Horn led an expeditionary force of some 4,600 men against Dorpat (modern-day Tartu, the main town in northeastern Livonia), which fell on 26 August.[37] Gustavus Adolphus stormed Bauske (modern-day Bauska) on 27 September, after which Mitau surrendered on 4 October. However, Horn, who in October had continued south with 10 companies of Finnish cavalry and 180 musketeers with the intention to take Dünaburg (modern-day Daugavpils), had to withdraw following the arrival of Commonwealth reinforcements.[38] Furthermore, there were reports that a second, and larger, Commonwealth army under Grand Marshal of Lithuania Jan Stanisław Sapieha (1589–1635; Lithuanian: Jonas Stanislovas Sapiega) was moving into the area of operations from the south, in addition to the smaller army under Krzysztof Radziwiłł which already operated there.

The winter became unusually harsh. Gustavus Adolphus decided to risk a battle, possibly because he feared that the two enemy armies would unite their forces. In January 1626, he ordered those of his men who had received adequate winter clothing out of winter quarters and across the Dvina to carry out a surprise attack on Sapieha's camp at Wallhof (Walmojzą; modern-day Valle). Gustavus Adolphus's expeditionary force consisted of 4,900 men (2,800 foot, 2,100 horse, and some artillery). He led a first group of probably 2,100 cavalry and some 1,000 musketeers in horse-drawn sledges, with three or four men in each, so as to keep up with the cavalry. This may have been one of the first occasions when Gustavus Adolphus added detached musketeers to his cavalry, which subsequently would become standard practice for him. On 17 January, he deployed his first group before dawn. He had hoped to carry out a surprise attack, but it had not been possible to determine the exact location of the Commonwealth units. The perhaps 3,800 to 4,900 Commonwealth troops (1,200 to 1,600 foot, 2,600 to 3,300 horse, and some artillery) under Sapieha at first remained in camp, because of poor reconnaissance but also because he had been instructed to avoid battle, yet decided to fight, and now was unsure of how to proceed. When Sapieha's men finally moved out, they soon found themselves outnumbered, as the remaining Swedish units under Colonel Maximilian Teuffel (d. 1631) arrived, too.

---

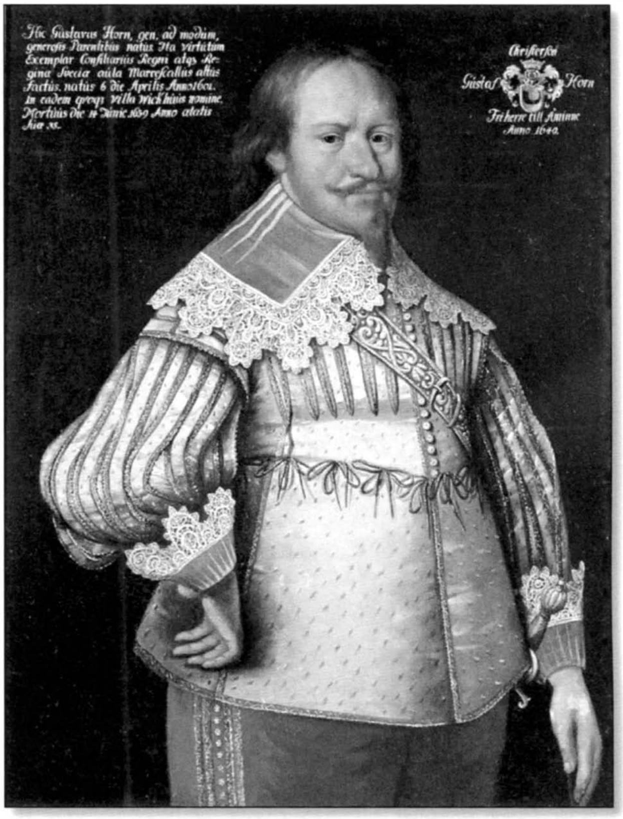
[34] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.163–4; *Sveriges krig* 2, pp.570–3.

[35] *Sveriges krig* 2, pp.179–80.

[36] *Ibid.*, p.194.

[37] *Ibid.*, p.197.

[38] *Ibid.*, p.208.

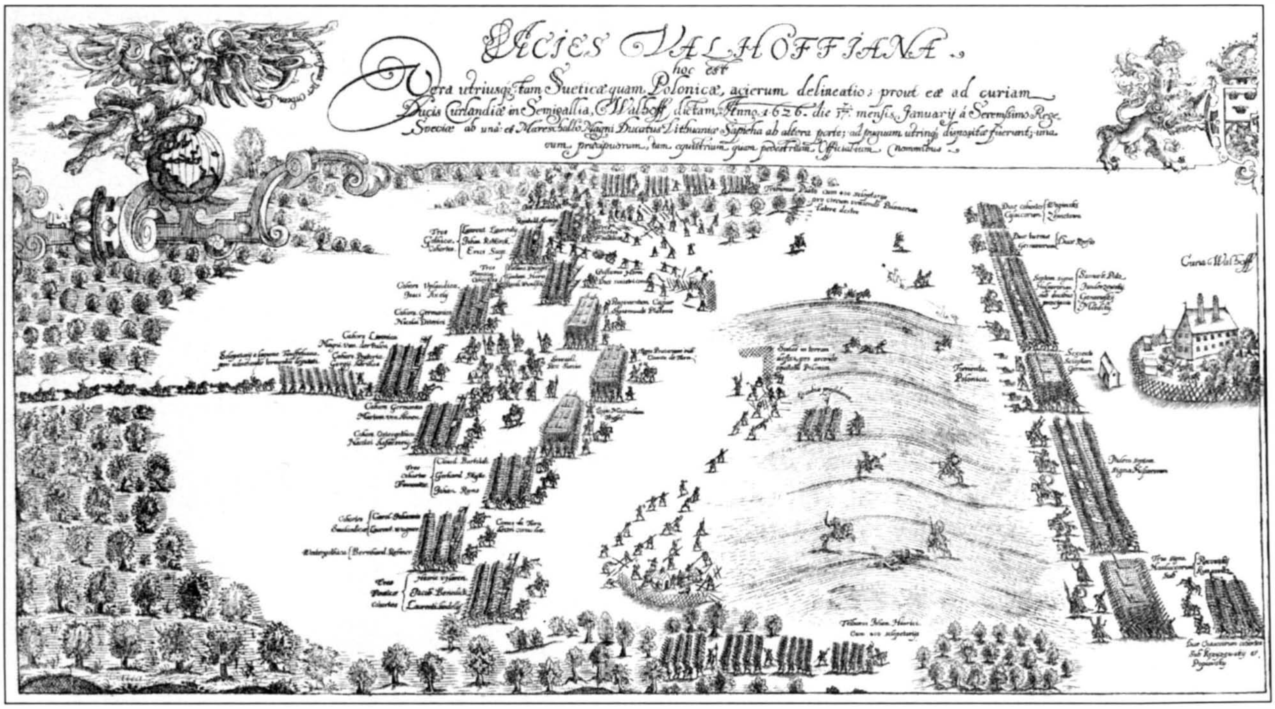


Gustav Horn. (Jacob Heinrich Elbfas, 1640; photo: Medströms)

After some preliminary skirmishes, the battle of Wallhof commenced with a charge of the Swedish cavalry, on the right wing led by the Bohemian officer Count Franz Bernhard von Thurn (1592 or 1595–1628), the son of Count Heinrich Matthias von Thurn, who had led the Bohemian Revolt eight years previously. The younger Thurn had gone into Swedish service in 1623 and was the colonel of the Household Regiment, which also fought at Wallhof, but on this occasion, he led the cavalry. On the left wing, the Swedish cavalry was led by Horn. Gustavus Adolphus led the centre, which consisted of infantry. In addition, other infantry detachments had taken advantage of the nearby woods to build improvised wooden field defences on parts of the field so as to protect against the Polish horse. Since the Swedish cavalry benefited from supporting fire from the musketeers on the flanks, the Polish horse soon broke, pursued by the Swedish cavalry. Abandoned, the Commonwealth infantry fled, too. Some 1,200 Commonwealth troops were lost on the field of battle and many more during the pursuit. Some 150 were captured. In comparison, Swedish losses were minimal.[39]

---

[39] *Ibid.*, pp.224–33; *Kungl. Svea livgardes historia* 3:1, pp.454–63; *Acies Valhoffiana* (contemporary print, reprinted in Fredrik U. Wrangel, *Svenskt Pantheon: porträtt och historiska plancher efter gravyrer* (Stockholm: Wahlström & Widstrand, 1906), pl. 230–31; Hedberg, *Kungl. Artilleriet*, pp.208–9. Sources differ on the respective strengths of the two armies.



Battle of Wallhof, 1626. The only known contemporary illustration. However, formations and equipment are probably generic.

Despite the victory, Gustavus Adolphus remained uncertain about his cavalry's capability. The lessons of Kircholm weighed heavily on any assessment of the chances of Swedish cavalry against Polish hussars. Although Swedish cavalry this time had been victorious, only a small part of the hussars had attacked. The battle accordingly revealed nothing about the results, or lack thereof, of the new Swedish cavalry tactics and training. Gustavus Adolphus was not yet ready to trust in his horse.[40]

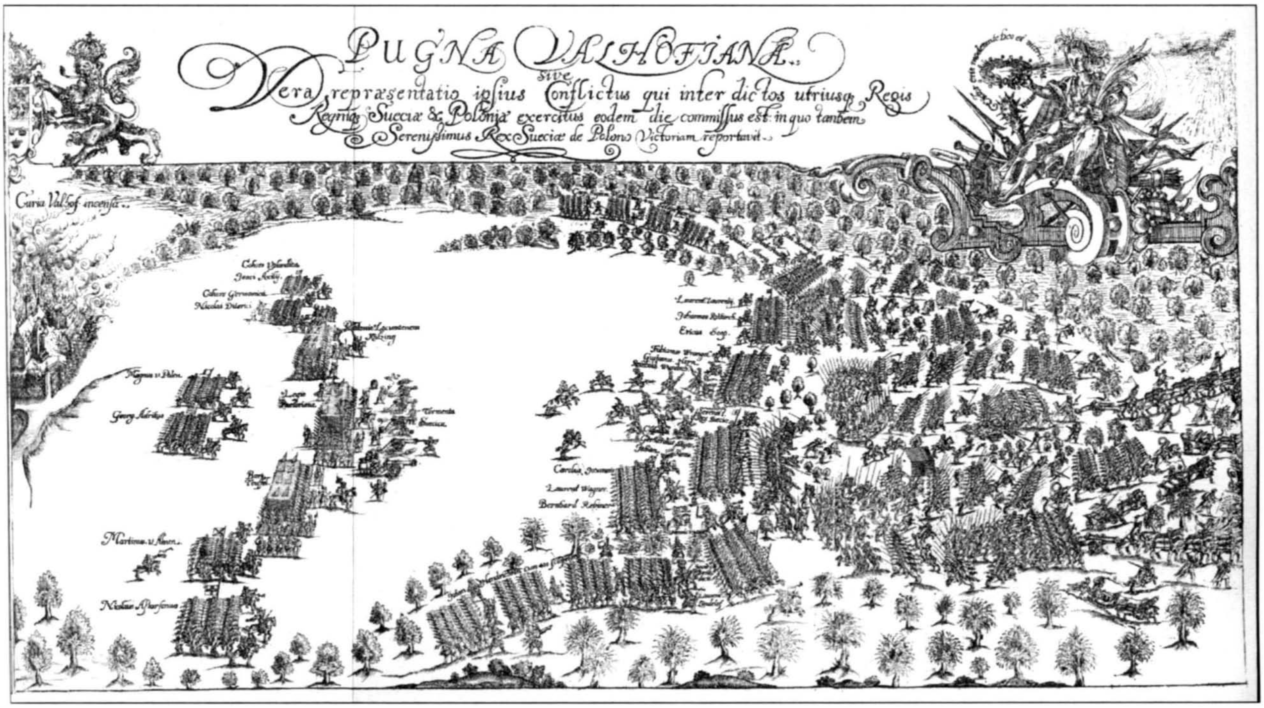
Yet, the battle of Wallhof was a victory. It completed the Swedish conquest of Livonia.

The Invasion of Prussia and the Battles of Mewe and Hammerstein

Henceforth, all Livonia was in Swedish hands, and Gustavus Adolphus could move the war into Polish Prussia. Divided into two domains, Prussia consisted of Ducal Prussia and Royal Prussia. Both belonged to the Polish Crown but under different circumstances. Ducal Prussia or East Prussia was held as a fief under the Polish Crown by the Elector of Brandenburg, George William (1595–1640), who was the brother-in-law of Gustavus Adolphus. Royal Prussia was ruled by Sigismund. Then there was the important port of Danzig (modern-day Gdansk), which enjoyed a somewhat independent

---

[40] *Kungl. Svea livgardes historia* 3:1, p.463. Several Swedish commanders had doubts; De la Gardie's cavalry had held its own against hussars already at the battle of Tver in Muscovy on 23 July 1609, yet this had not erased the memory of Kircholm.


Pugna Valhofianæ.. sive
Vera repræsentatio ipsius Conflictus qui inter dictos utriusq Regis
Regni Sueciæ & Poloniæ exercitus eodem die commissus est: in quo tandem
Serenissimus Rex Sueciæ de Polonis Victoriam reportavit.

status due to its wealth and population of more than 64,000 inhabitants.

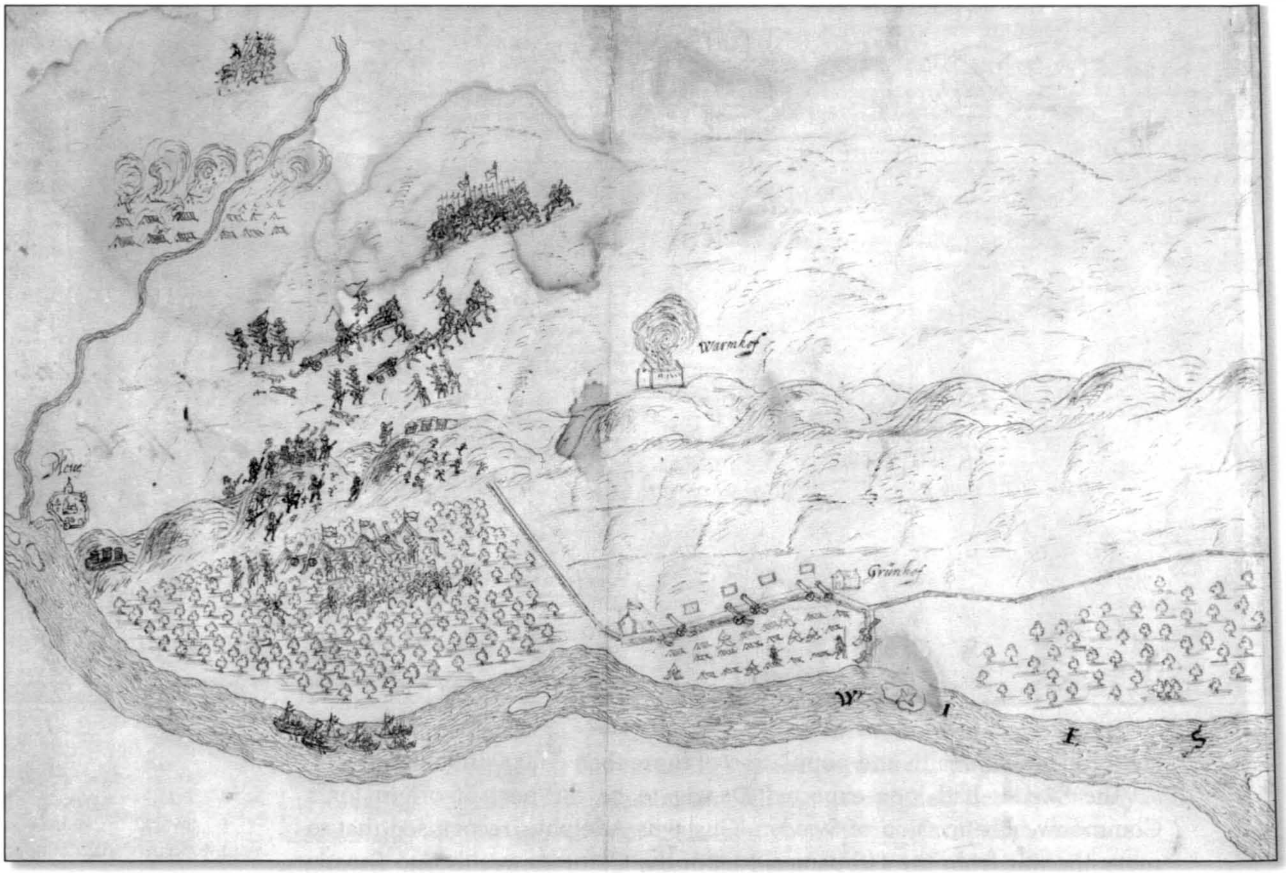
The Swedes had long expected Danzig to be the port of origin for a Commonwealth invasion of Sweden. Gustavus Adolphus recognised that to move the war from the Lithuanian part of the Commonwealth into Prussia was a means to apply further pressure on Sigismund, since an offensive there threatened his core territory. An invasion of Prussia would also prevent Sigismund from mobilising an invasion army there, and it is telling that Gustavus Adolphus's plans for a war in Prussia had begun to take shape in 1623–1624 when Sigismund's invasion threat seemed real enough.[41] Another reason for Gustavus Adolphus's decision to move the war south was to take advantage of the easier conditions of supply in Prussia, whose agriculture had a better yield than that of Livonia. Finally, Prussia was wealthy, so there was a hope of gaining revenues. That the hope for revenues was a factor is shown in the preliminary Swedish budget for 1626–1627 which allocates more money to the army in Livonia than the larger invasion army to be sent to Prussia.[42] At some point in late May 1626, Gustavus Adolphus took the decision to extend the war to Prussia.[43] The army was already prepared, as was an invasion fleet of 29 warships, 31 smaller vessels, and 81 transports. On 6 July 1626, Gustavus Adolphus began to land 11,500 foot, 1,209 horse, and a strong train of artillery (150 men, 39 cannons including four forty-eight-pounders and 17 twenty-

---

[41] Norberg, *Polen*, pp.180, 189–90, 201, 205, 207.

[42] *Ibid.*, pp.274–5.

[43] *Ibid.*, pp.276.



Above: First battle of Mewe, 1626. The battle, or rather skirmish, took place in the forest and on the hills on the right, and the contemporary drawing illustrates both the confused nature and small scale of the affair. (Photo: Medströms)

Above, right: Stanisław Koniecpolski.

four-pounders, and 21 mortars) in Pillau (modern-day Baltiysk) in Ducal Prussia. Pillau, defended by 340 men, immediately surrendered.[44]

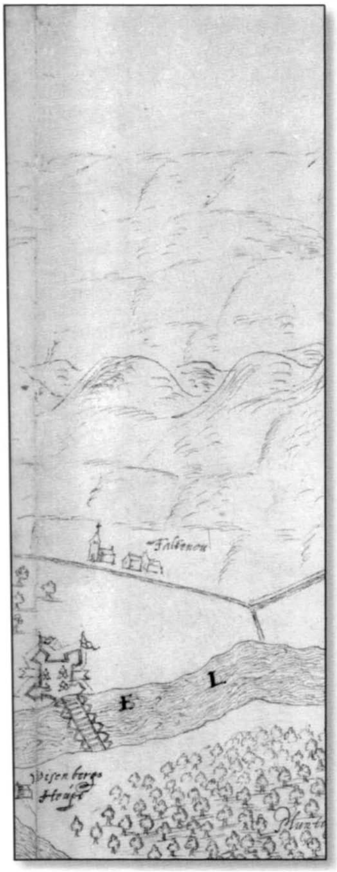
From this base, and against the Elector's wish, the Swedes went on to take several towns in Royal Prussia, including Braunsberg (modern-day Braniewo), Frauenburg (now Frombork), Elbing (now Elbląg), Marienburg (now Malbork), Mewe (now Gniew),and Putzig (now Puck). The Swedes also imposed a blockade on Danzig and began to levy tolls on its maritime trade. Negotiations took place, but Danzig refused to surrender. Gustavus Adolphus accordingly established two fortified camps nearby, one upriver on the River Vistula at Dirschau (now Tczew) and another at Danziger Haupt (now Gdańska Głowa), the town's exit to the Baltic Sea.

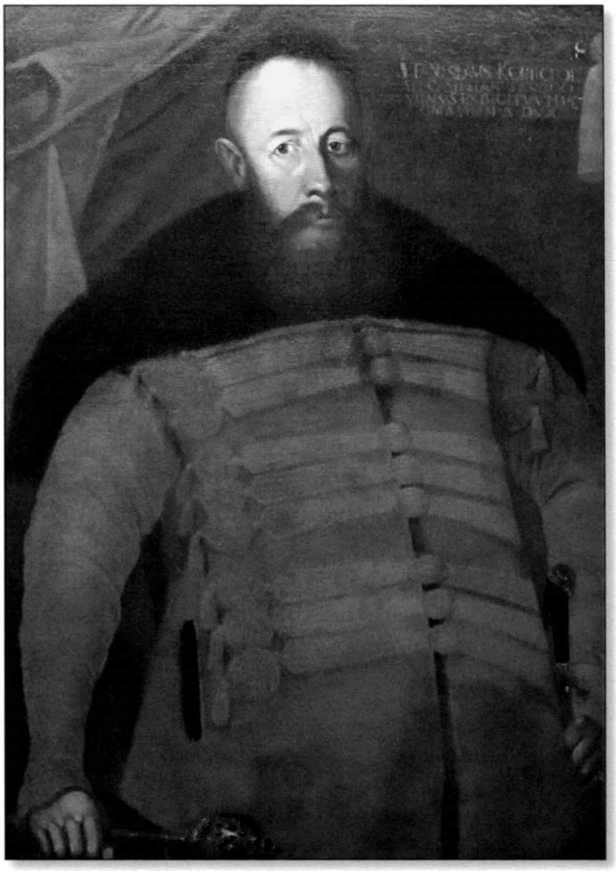
In response, a Commonwealth army under Sigismund moved against the Swedes. Gustavus Adolphus had been right: the two kings would now confront each other directly. In September 1626, Sigismund's army had a strength of some 11,000 men (4,030 foot, 7,910 horse, and 20 cannons).[45]

---

[44] *Kungl. Svea livgardes historia* 3:1, pp.479, 484; Hedberg, *Kungl. Artilleriet*, pp.209–10. On the naval operation, see *Sveriges krig*, Suppl. Vol. 1, pp.160–8.

[45] *Sveriges krig* 2, p.277; *Kungl. Svea livgardes historia* 3:1, p.489; Hedberg, *Kungl. Artilleriet*, pp.210–11.





Sigismund was superior in cavalry but Gustavus Adolphus had more, and better trained, foot.

In September 1626 Sigismund moved against Mewe, which lacked proper fortifications and was only held by 140 Swedes and some burgher militia. However, Mewe was important, since it stood between the Commonwealth army and access to the Swedish camp at Dirschau. Gustavus Adolphus was then with the Swedish army (6,387 foot, 1,274 horse, and some artillery[46]) at Dirschau. He marched with 2,000 foot (including his Life Guard battalion of 719 men), some 1,000 to 1,200 cavalry, and some artillery to Mewe,[47] and on 22 September several skirmishes took place at Warmhof, near Mewe. This subsequently became known as the first battle of Mewe. However, the skirmishes were inconclusive, and there were few casualties on either side.

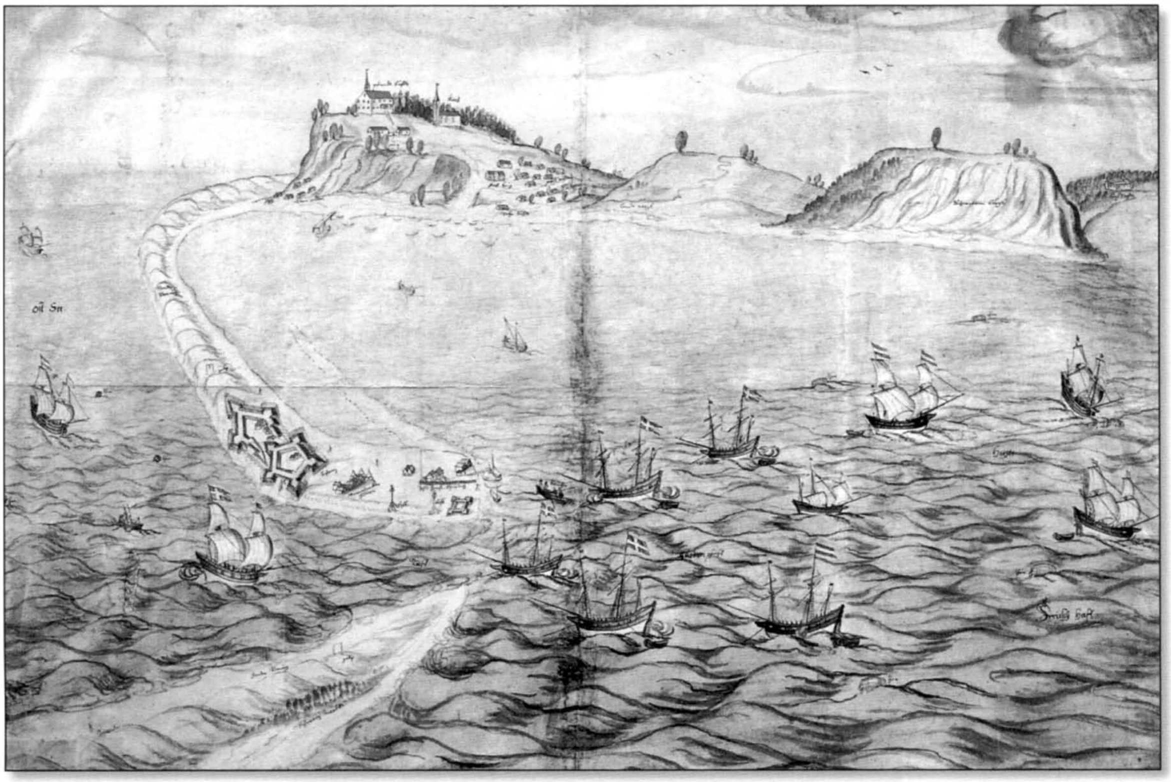
Both sides received reinforcements, which in Gustavus Adolphus's case raised the army's infantry strength to some 9,500 foot. His horse remained no more than 1,200.[48] Meanwhile, the Commonwealth siege of Mewe continued. The situation in the town was growing desperate. As a result, on

---

[46] *Sveriges krig* 2, pp.281–2.

[47] *Ibid.*, p.285; *Kungl. Svea livgardes historia* 3:1, pp.490–91.

[48] *Kungl. Svea livgardes historia* 3:1, p.495.



Swedish navy takes tolls at Pillau, c. 1626. The painting also depicts the henceforth standard Swedish naval flag. (Photo: Medströms)

1 October Gustavus Adolphus attacked the Commonwealth camp, an action which became known as the second battle of Mewe. Neither side used more than a few of the units available to them. The Polish hussars charged the Swedish infantry but failed to make a significant impact, primarily because of the existence of a reserve and, later, an enveloping movement followed by a flank attack by the Swedish infantry. The Swedish infantry thus proved the value of the new organisation and tactics. The Swedish cavalry was primarily used defensively so as to prevent a flank attack.[49]

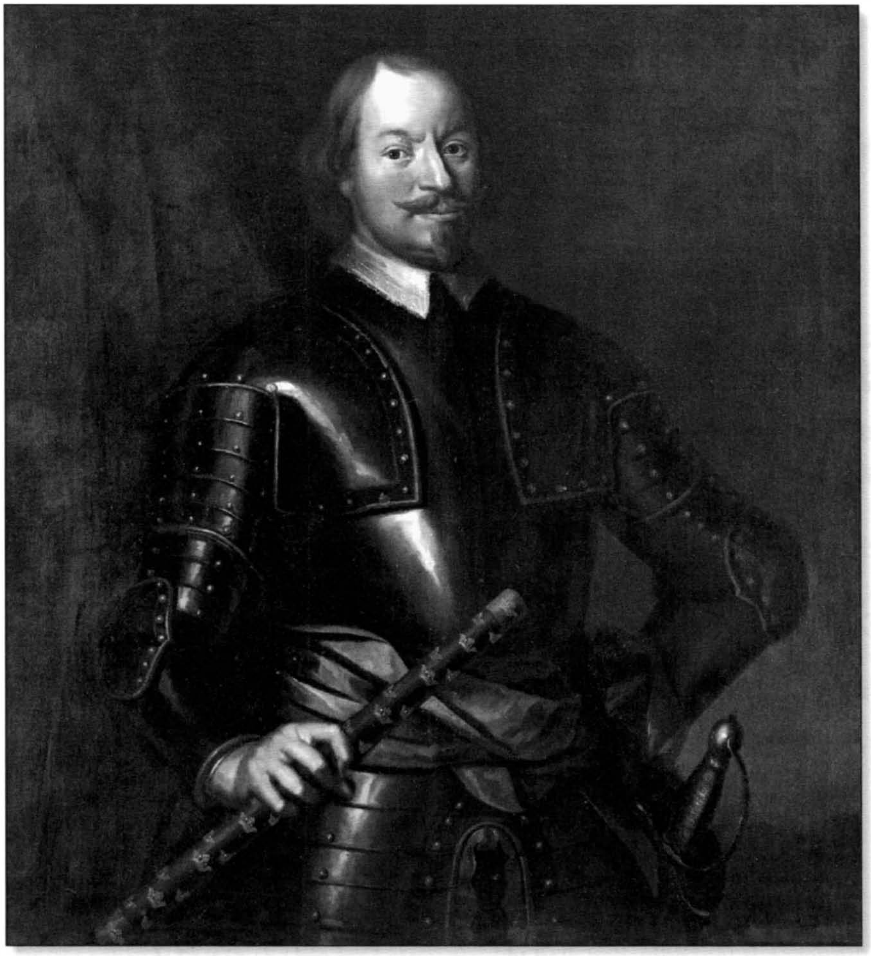
As a result, the Commonwealth siege of Mewe was lifted, and Sigismund retreated. The defeat at Mewe was not his only problem. Trouble again brewed in the Ukraine, where the Crimean Tatars were raiding Commonwealth settlements. Gustavus Adolphus did not pursue; he was still cautious about his men's ability against the famous Polish hussars.[50]

Although Gustavus Adolphus returned to Stockholm, the fighting in Prussia continued during the winter. The Commonwealth forces tried to push the Swedes out from the fortified camp at Danziger Haupt; however, there Johan Banér (1596–1641) was in command. Banér, a son of the aforementioned Gustav Banér, had seen his first action at the siege of Pskov in 1615. He had also distinguished himself at the siege of Riga six years later, for which he was promoted to colonel. Banér repulsed all attempts to expel the Swedes, but the

---

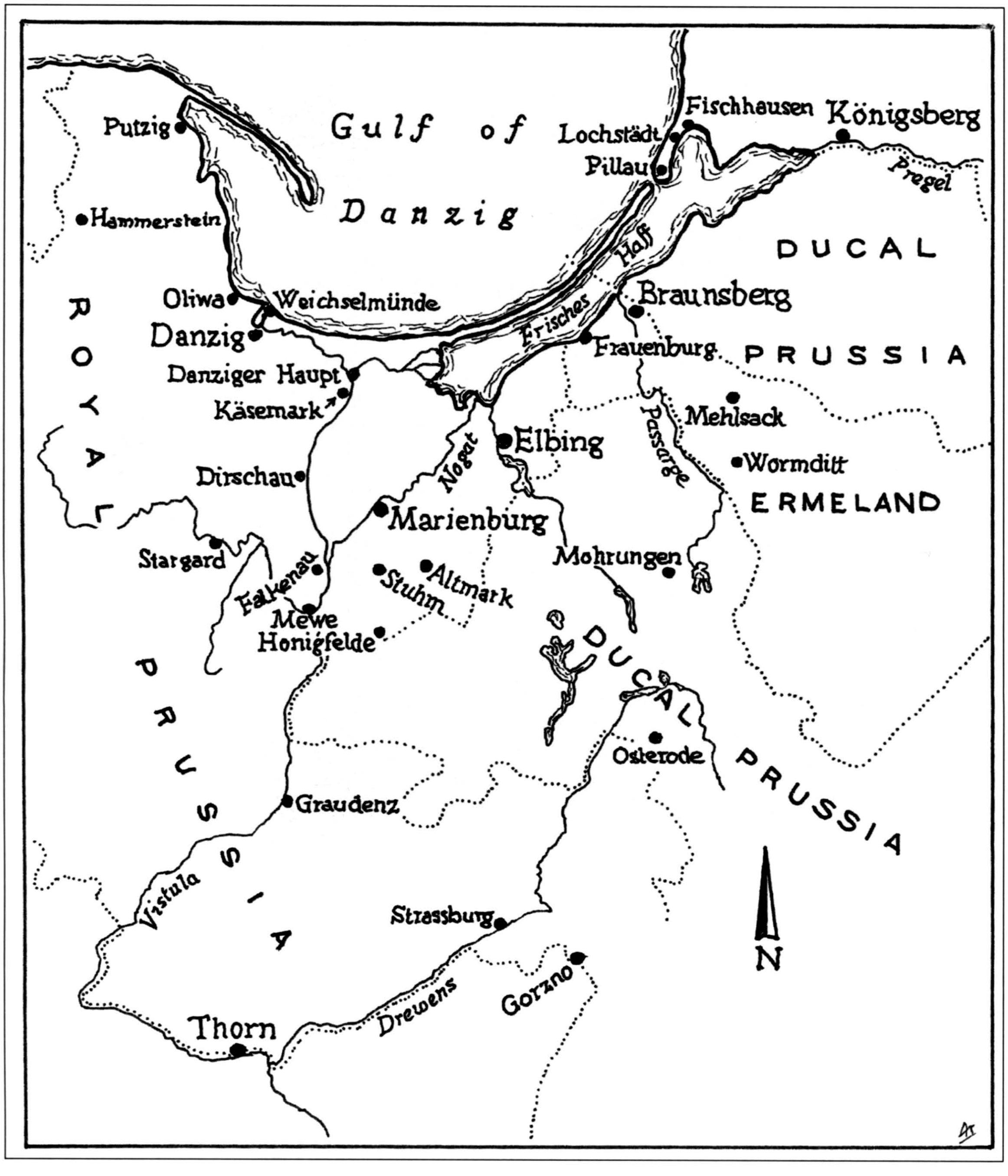
[49] *Ibid.*, pp.495–502.

[50] *Sveriges krig* 2, p.296.



Johan Banér.
(Photo: Medströms)

Commonwealth commander, Field Crown Hetman Stanisław Koniecpolski (1591–1646), who had recently returned with his experienced troops from the Ukrainian front and assumed command after Sigismund's departure, scored other victories. In November, the Swedish commandant in Wormditt (modern-day Orneta) hastily surrendered (and was later executed for it). In early April 1627, the Swedish garrison had to surrender Putzig after a long blockade and siege. In late April 1627, Koniecpolski intercepted and defeated a Swedish relief force from Germany at Hammerstein (Hamersztyn, modern-day Czarne). Two German colonels in Swedish service, the aforementioned Maximilian Teuffel and Johann Streiff von Lauenstein (d. 1632), had enlisted 2,500 men (some1,400 foot and 1,100 horse) in Germany. Teuffel had already commanded a regiment in the battle of Wallhof and Lauenstein, too, was known for his reliability. However, after a long and difficult journey towards Putzig, they found that it had fallen and Commonwealth forces blocked the road. An attempt to bypass the enemy by moving the main force south to Hammerstein failed. Koniecpolski intercepted the still remaining 1,700 to 1,800 German troops on 12 April. Although the Polish cavalry could not break through the rapidly erected field fortifications, after several skirmishes the enlisted Germans lost hope. They mutinied on 15 April, after which they


Gulf of Danzig
Putzig
Hammerstein
Oliwa
Weichselmünde
Danzig
Danziger Haupt
Käsemark
Dirschau
Stargard
Falkenau
Mewe
Honigfelde
Stuhm
Altmark
Marienburg
Nogat
Elbing
Frisches Haff
Lochstädt
Fischhausen
Pillau
Königsberg
Pregel
DUCAL PRUSSIA
Braunsberg
Frauenburg
Mehlsack
Passarge
Wormditt
ERMELAND
Mohrungen
DUCAL PRUSSIA
Osterode
ROYAL PRUSSIA
Graudenz
Vistula
Strassburg
Gorzno
Drewens
Thorn
N

Map 4. Prussia

handed over both Teuffel and Lauenstein. After further negotiations, most of the survivors went into Commonwealth service.[51] Both Teuffel and Lauenstein were exchanged later in the year and returned to Swedish service.

The Assault on Käsemark

In May 1627, Gustavus Adolphus returned to Pillau with new reinforcements for the field army. The situation had grown complicated. While the Swedes remained entrenched in Danziger Haupt and Dirschau, two Commonwealth armies were deployed against them, and the town of Danzig, too, had deployed troops in a system of bastions and redoubts that was a latent threat to the Swedish lines. The Swedes were attempting to blockade Danzig, but the Commonwealth troops imposed a blockade on the Swedes. In addition, George William of Brandenburg wavered, unsure of whether to oppose his Swedish brother-in-law or not (in the end he chose not to).[52]

Having first resolved the situation with George William, Gustavus Adolphus then attempted to relieve the besieged fortified camp at Danziger Haupt by carrying out a night-time amphibious assault across the Vistula against the Danzig-controlled bastion of Käsemark (Kiezmark) opposite Danziger Haupt. However, the sentries heard the Swedes approaching and opened fire. Losing the element of surprise, the operation failed. Gustavus Adolphus remained on the shore and could not to see what happened. He was slightly near-sighted, a trait that he apparently attempted to hide and amend by regularly using a field glass.[53] Yet, he often felt compelled to move closer to the enemy position so as to be able to observe, which meant moving into harm's way. For this reason, his officers and men often thought that he took unnecessary risks. Wishing to take control of the operation, he now crossed the river in a small boat. While crossing, he was hit in the hip by a stray musket ball; believing that the wound was mortal, he ordered the assault to be abandoned. However, the wound turned out not to be very deep, so he recovered within a few days. Gustavus Adolphus was not the only casualty. Thurn, commander of the Household Regiment, suffered a head wound, although he, too, recovered.[54]

The Battle of Dirschau

After several renewed, but indecisive, attempts against and around Danzig, Gustavus Adolphus moved his army against Koniecpolski. The Swedish army gathered at its old camp at Dirschau.[55] The share of cavalry in the field army had significantly increased. The ratio of infantry to cavalry had changed to 3:2. Gustavus Adolphus this time appears to have wanted to put his cavalry to the test, to determine how it held up against the Commonwealth forces in a set battle. Axel Oxenstierna later wrote that the King had wanted 'a little test of our cavalry'.[56]

---

[51] *Ibid.*, pp.306–10; Paweł Skworoda, *Hammerstein 1627* (Warsaw: Bellona, 2006).

[52] *Sveriges krig* 2, pp.329–30, 333; *Kungl. Svea livgardes historia* 3:1, p.513.

[53] *The Swedish Intelligencer* (London: Nathaniel Butter and Nicolas Bourne,1632–1633), vol. 3, p.191; Göransson, *Gustav II Adolf*, p.28.

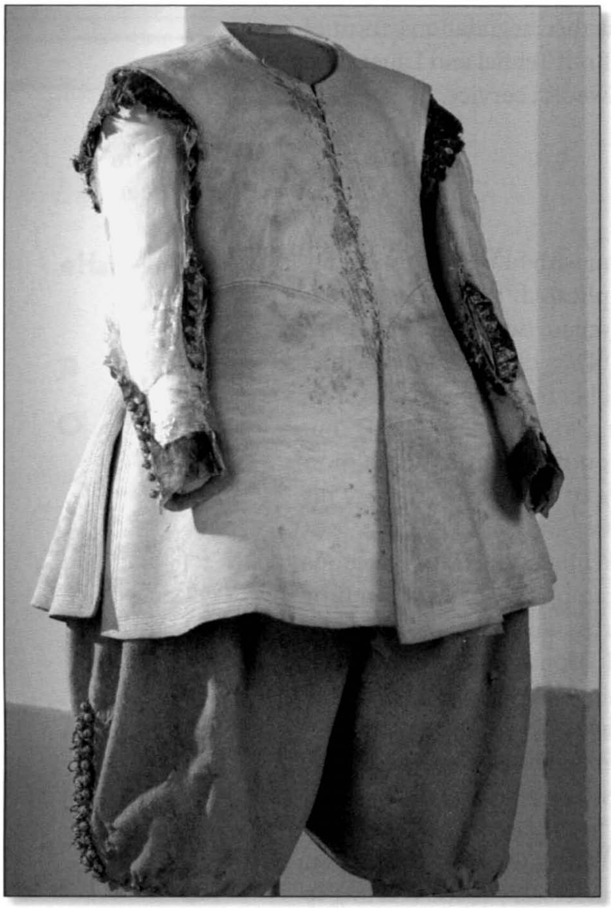
[54] 'Anteckningar om krigshändelser i Preussen, 1627,' *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:1 (Stockholm: P.A. Norstedt & Söner, 1888), pp.108–9; *Sveriges krig* 2, pp.342–4; *Kungl. Svea livgardes historia* 3:1, pp.515–16.

[55] *Sveriges krig* 2, 353–4; *Kungl. Svea livgardes historia* 3:1, p.523.

In the ensuing battle of Dirschau, on 17 August 1627, Gustavus Adolphus commanded the centre, Thurn the right wing, and Herman Wrangel (1585–1643) the left wing. The Swedish army consisted of 5,914 foot and 4,169 horse,[57] and Koniecpolski had 3,200 foot and 4,500 horse. Both sides had some artillery.[58]

The battle got underway late in the day, initiated by the Swedish cavalry which attacked the Commonwealth cavalry, including the Polish hussars, as they had begun a retreat into camp. The Commonwealth troops fought hard, but the Swedes pushed back their opponents. However, since the time was late, Gustavus Adolphus had no opportunity to follow up the attack on this day.[59]

On 18 August, Gustavus Adolphus resumed the battle, since he knew that Commonwealth reinforcements were on the way and wished to reach a decisive victory. However, at an early stage, as he rode forward to observe how the battle proceeded, Gustavus Adolphus was again wounded. A Polish captain, Samuel Stanisław Nadolski (1590–1655), had noted the King's presence and had two skilled marksmen target him. The second shot hit the King in the right shoulder, near the throat. This wound was more serious than past ones. Although he recovered, the ball could not be removed.[60]



25. Buff coat of elk hide with sleeves made of silk, of which now only fragments remain. The coat is collarless and seamed at the waist with long skirts in four pieces. Breeches of grey Spanish cloth. Used by Gustavus Adolphus at battle of Dirschau, 1627. (Royal Armoury, Stockholm)

The day was already late, and the Swedes halted their advance. Nonetheless, the battle was held to be the first in which Swedish cavalry decisively defeated Polish hussars. Dirschau was for the Swedish cavalry what Mewe had been for the infantry. The Swedish army was no longer inferior to its Commonwealth equivalent, as it had been at the beginning of Gustavus Adolphus's reign.

---

[56] Axel Oxenstierna to his younger brother Gabriel Gustafsson Oxenstierna, 15 August 1627 (O.S.), *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:3 (Stockholm: P. A. Norstedt & Söner, 1900), p.612. See also Gustaf Petri, *Kungl. Första livgrenadjärregementets historia*2: Östgöta regemente till fot 1619–1679 (Stockholm: P.A. Norstedt & Söner, 1928), p.75.

[57] *Sveriges krig* 2, pp.576–7.

[58] *Ibid.*, p.357.

[59] *Ibid.*, 358–61; *Kungl. Svea livgardes historia* 3:1, p.524.

[60] *Sveriges krig* 2, pp.362–5; *Kungl. Svea livgardes historia* 3:1, 5 pp.24–8; 'Anteckningar om krigshändelser i Preussen, 1627', *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:1 (Stockholm: P.A. Norstedt & Söner, 1888), pp.111–15.

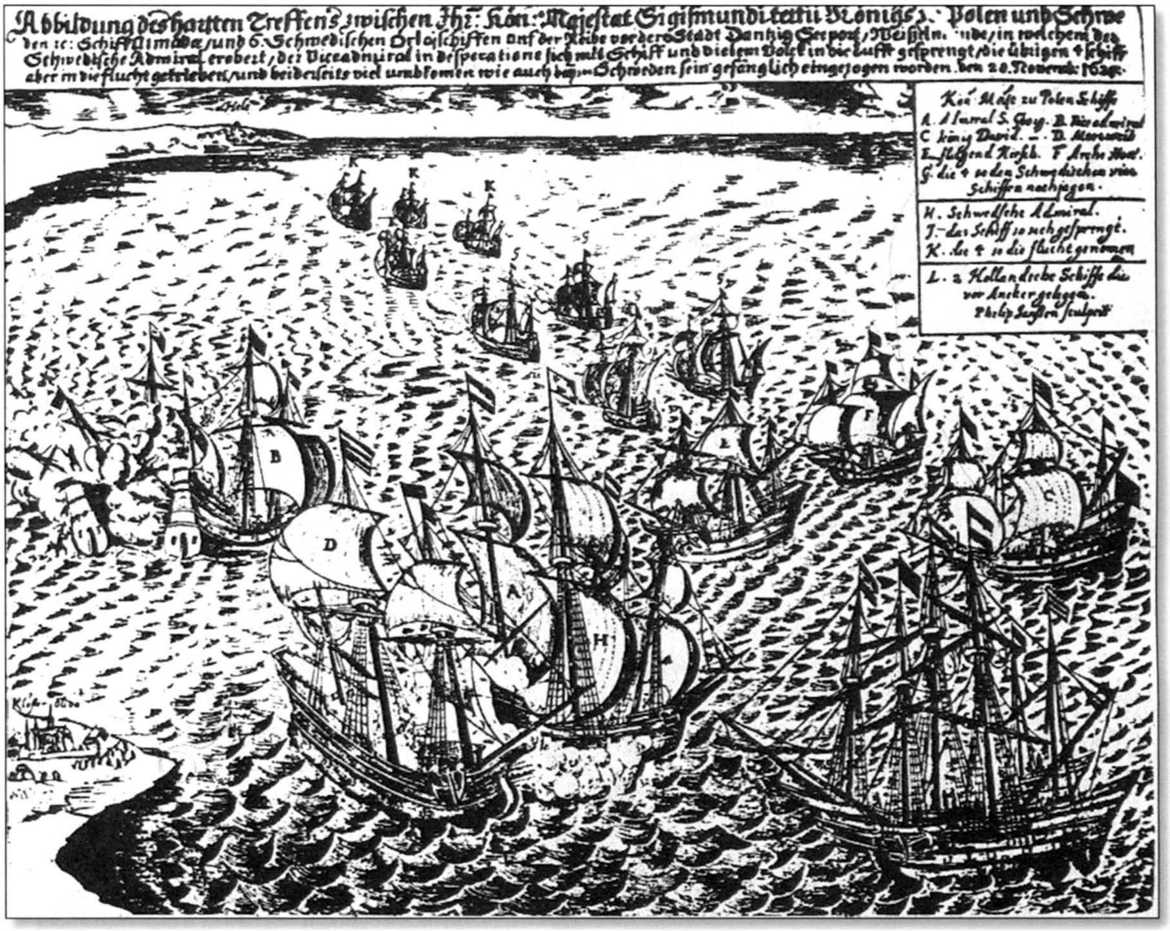


Abbildung des harten Treffens zwischen Ihr: Kön: Majestat Sigismundi tertii Königs z. Polen und Schweden

Battle off Oliwa, 1627.

The years of campaigning also meant that the Swedish army was gaining in experience. Had these improvements not taken place during the war with the Commonwealth, the Swedish army would not have been able to make an impact in Germany a few years later.

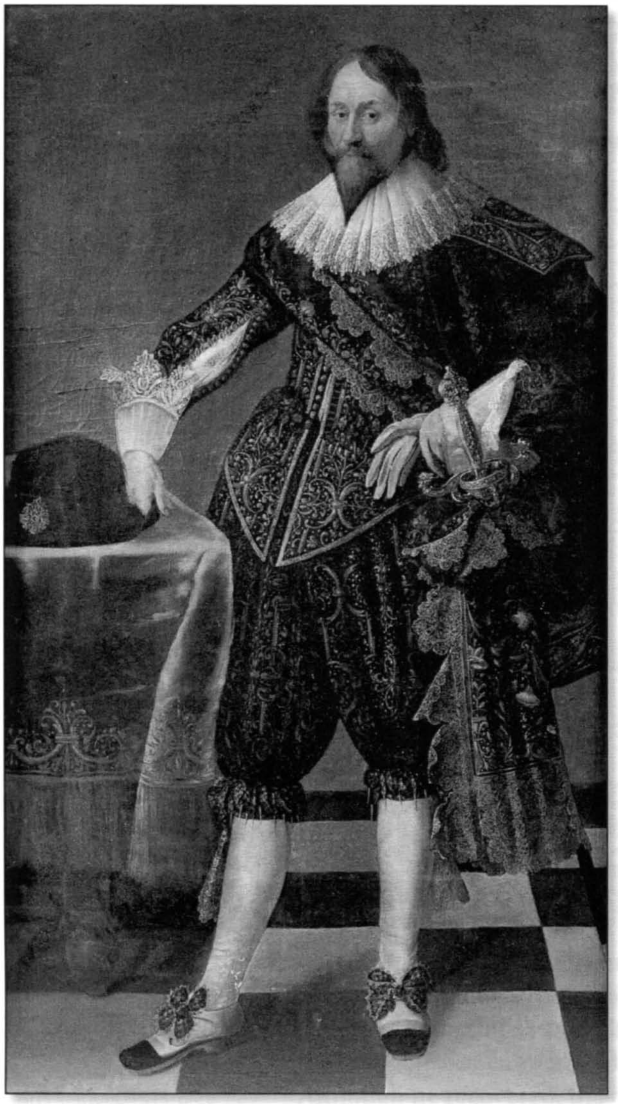
The Blockade and Siege of Danzig

Danzig did not surrender, even when under blockade, and the Commonwealth forces in Danzig contested the blockade.

On 28 November 1627, a naval battle took place off Oliwa near Danzig between 10 Commonwealth and six Swedish warships. Two Swedish warships (*Solen* and *Tigern*) were lost, but both Nils Stiernskiöld, the Swedish admiral, and Arend Dijckman, a Dutchman appointed admiral of the fledgling Polish-Lithuanian Commonwealth navy, fell in the battle.[61] From early spring 1628, the Swedish navy increased its efforts to blockade

---

[61] *Sveriges krig* 2, pp.374–5; *Sveriges krig*, Suppl. Vol. 1, 173–6; *Kungl. Svea livgardes historia* 3:1, 535; Józef Wiesław Dyskant, *Bitwy polskie: Oliwa 1627* (Warsaw: Bellona, 1993); Eugeniusz Koczorowski, *Historyczne bitwy: Oliwa 1627* (Warsaw, Bellona, 2002).



Herman Wrangel, c.1630. (Skokloster Castle; Photo: Medströms)

Danzig, and also the smaller port of Putzig. The primary purpose of the blockade was to prevent the Commonwealth fleet in Danzig from setting out; however, a secondary but still vital objective was to control shipping to and from Danzig. All incoming merchant ships were first diverted to Pillau, which remained in Swedish hands, where customs duties were collected.

Gustavus Adolphus and new reinforcements arrived in May. In late July 1628, Gustavus Adolphus carried out a surprise attack on Weichselmünde, near Danzig. He brought some artillery, including several leather cannons, across broken ground that the Commonwealth troops may have thought was impassable. For several hours he carried out an artillery battle against the Commonwealth fleet. Three Commonwealth warships were lost, but the rest managed to take cover within Danzig port. Moreover, the continuous rain saved the Commonwealth fleet from more serious losses.[62] Gustavus Adolphus had hoped to force Danzig into signing an agreement of neutrality, however Danzig proved too tough a nut to crack. In August Gustavus Adolphus instead set out to force Koniecpolski to give battle. However, the Commonwealth commander refused, and instead followed a scorched-earth policy, which had a considerable effect on the Swedes.[63] By August, Gustavus Adolphus fielded 8,873 foot and 6,085 horse.[64] When winter approached, his army had shrunk considerably in size, primarily from starvation and disease.

Several skirmishes followed. The one major engagement was the battle of Osterode (modern-day Ostróda) on 23 October 1628, in which Commonwealth troops successfully ambushed a recently enlisted Swedish cavalry force under Colonel Wolf Heinrich von Baudissin (also known as Bauditz; 1579–1646), a Silesian who had gone into Swedish service who was regarded as the army's best cavalry commander.. Baudissin, wounded, fell into Commonwealth captivity (he was later exchanged). His cavalry regiment also lost three cornets. Although Gustavus Adolphus personally led 2,000 foot and 2,000 horse to

---

[62] *Sveriges krig* 2, pp.409–10.

[63] *Ibid.*, 425–8; *Kungl. Svea livgardes historia* 3:1, p.560.

[64] *Sveriges krig* 2, pp.414–15.

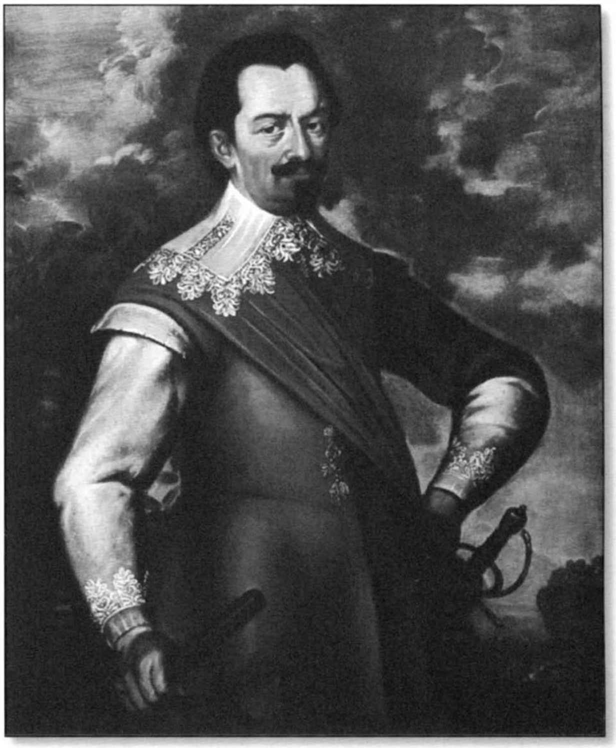
Osterode, which he captured by blowing the gates with petards, the loss of Baudissin was significant.[65]

Having failed to come to grips with Koniecpolski, Gustavus Adolphus handed over command to Field Marshal Herman Wrangel and returned to Sweden.

The Relief of Stralsund

Meanwhile, important events had taken place in Germany. Stralsund, a wealthy town in Pomerania with some 18–20,000 inhabitants, was under siege by the Imperial commander Albrecht von Wallenstein (1583–1634).[66]

Already in 1627, when Wallenstein's army was approaching, the town magistrates had employed a team of Swedish engineers to improve fortifications. At sea, the Danish navy remained a formidable force, and Danish King Christian IV remained at war with Wallenstein. As the siege began in May 1628, seven companies of Scottish soldiers in Danish service in all haste were sent as reinforcements to the Stralsund military, arriving on 4, 7, and 17 June under the overall command of Henrik (or Heinrich) Holck (1599–1633).[67] Gustavus Adolphus decided to intervene, too. On 3 July, Stralsund signed a 30-year treaty with Gustavus Adolphus, offering a base in exchange for protection. The Swedish delegation was led by Philipp Sadler von Salneck (1594–1641), and the Stralsunders had little choice but to sign. Wallenstein's reinforcements were arriving as the delegations were negotiating. As soon as the Stralsunders had signed, 600 Swedish troops of the Uppland Regiment, previously on shipboard duty, under Colonel Fritz Rosladin and Lieutenant Colonel Axel Duwall disembarked in the town.



Albrecht von Wallenstein. (Photo: Medströms)

Fritz Petrovich Rosladin (1600–1628) was the adopted son of one of several Russian noble families who had become naturalised Swedes while in Swedish service. While fighting in Estonia, Charles IX or somebody in his entourage had found the boy abandoned in a field soon after birth and given him a home. Axel Duwall was the son of Albert MacDougal, a Scottish soldier who had moved to Mecklenburg already around 1594.[68]

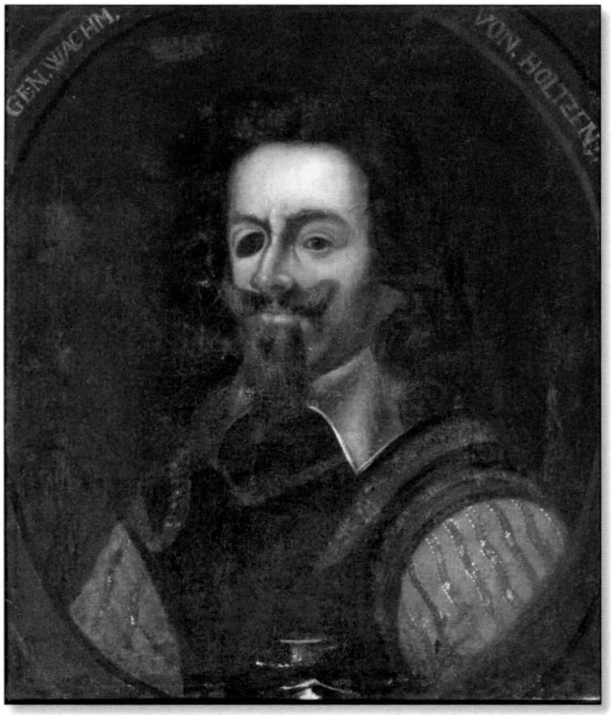
---

[65] *Ibid.*, p.427.

[66] *Sveriges krig* 3, p.64. Other sources suggest a population of around 12,000.

[67] Don McNair, *The Struggle for Stralsund, 1627* (Farnham, Surrey: Pike and Shot Society, 2012), p.28.

[68] On Axel Duwall, see Steve Murdoch and Alexia Grosjean, The Scotland, Scandinavia and Northern European Biographical Database <https://www.st-andrews.ac.uk/history/ssne/item.php?id=2446>.


GEN.WACHM. VON.HOLTEN.

Henrik Holck.
(Photo: Medströms)

Together, the Danish and Swedish contingents beat off the Imperial assaults on 6–8 July. Fighting was desperate, and Duwall was captured, while Rosladin was seriously wounded and later died from his wounds. On 27 July, 1,200 additional Swedish troops from Prussia under Colonels Alexander Leslie and Nils Brahe moved into Stralsund. Leslie (1582–1661) was a Scotsman who had been in Swedish service since 1608 and in 1609–1610 participated in De la Gardie's campaign in Muscovy. The much younger Count Nils Brahe (1604–1632) was a veteran also, having fought for Gustavus Adolphus since the siege of Riga in 1621. Wallenstein abandoned the siege on 22 July, leaving his recently appointed Field Marshal, a Lutheran Brandenburger named Hans Georg von Arnim (1583–1641), to withdraw the army.[69] After further negotiations with the Stralsunders, Leslie was left in charge of Stralsund's defences. Gradually, Stralsund fell under Swedish rule. Leslie had considerable experience; before going into Swedish service, he had been in Dutch service against Spain in 1605.

This was not the first time that Gustavus Adolphus had considered a Swedish involvement in the German war. Already in 1619–1620, he had negotiated with Frederick V (1596–1632), Elector Palatine and the elected King of Bohemia, about an alliance against primarily the Commonwealth but also, under certain conditions, the Empire and Catholic League, the latter a coalition of Catholic states of the Empire headed by Maximilian of Bavaria (1573–1651). Gustavus Adolphus had also raised the issue with other Protestant rulers, including John George, the Elector of Saxony (1585–1656).[70] In 1623–1625, Gustavus Adolphus had negotiated with the Dutch Republic, England, and the northern German rulers including Adolf Frederick (1588–1658), Duke of Mecklenburg, and George William, Elector of Brandenburg, about an alliance to meet the Imperial offensive to the north and, ostensibly, to restore Frederick V to the Bohemian throne. However, then, too, Gustavus Adolphus's primary motivation was to link the war in Germany with a war against the Commonwealth.[71] Besides, the plans led nowhere.

Gustavus Adolphus had hoped to gain a foothold on the southern Baltic shore since at least 1626. As we have seen, he possibly entertained such ambitions already in 1623–1624, when he apparently first considered taking

---

[69] *Sveriges krig* 3, pp.83–98; McNair, p.38. See also Monro, *Monro His Expedition* 1, pp.62–80. Monro, then in Danish service, was among the Scots who were sent to Stralsund, where he was wounded.

[70] Norberg, *Polen*, pp.90–96.

[71] *Ibid.*, pp.189–97, 213–20, 260–7.

Danzig as a means to thwart Sigismund's invasion plans.[72] At the time of the siege of Stralsund, however, the situation was different and more serious. Spain had negotiated with the Emperor since 1625 about establishing a Spanish naval base in the north, preferably in East Friesland, adjacent to the Dutch Republic. This would enable Spain to assume control of the profitable Baltic-Mediterranean trade, which formed the foundation of Dutch economic prosperity. While these negotiations failed, Wallenstein's successful campaign in the north in 1627 improved Spanish hopes. In 1628, the Emperor approved a plan for Wallenstein to establish a naval base in the Baltic and, since an old Imperial title had been 'King of the Ocean' (*Rex oceani*), appointed him 'General of the Oceanic and Baltic Seas' (*deß Oceanischen und Baltischen Meers General*).[73] Wallenstein established a nascent naval base for Spanish warships in Wismar with the objective to gain naval supremacy in the Baltic Sea. Wallenstein considered Wismar, a port with 3,000 inhabitants garrisoned by Imperial troops in 1627,the finest port of the Baltic Sea. He also dreamed about digging a canal between the North Sea and the Baltic, which would enable the avoidance of the tolls on the Sound.[74]

Nils Brahe. (Photo: Medströms)

As usual, there was also a link to the dynastic rivalry with Sigismund. In both 1595–1596 and 1598, there had been Spanish plans to offer Sigismund support in exchange for the right to base a Spanish fleet at Elfsborg in Sweden, although the ensuing negotiations had led nowhere.[75] It was only Sweden and Denmark which maintained significant fleets in the Baltic Sea, and both preferred it this way. Wallenstein's project was accordingly a direct threat to Sweden's interests. Moreover, a Catholic naval coalition in the Baltic might have enabled a Commonwealth invasion of the Swedish heartland. In August 1629, when Imperial troops had joined the Commonwealth army that opposed the Swedes, there was a concern that the Imperial Baltic fleet might attack Swedish ships in

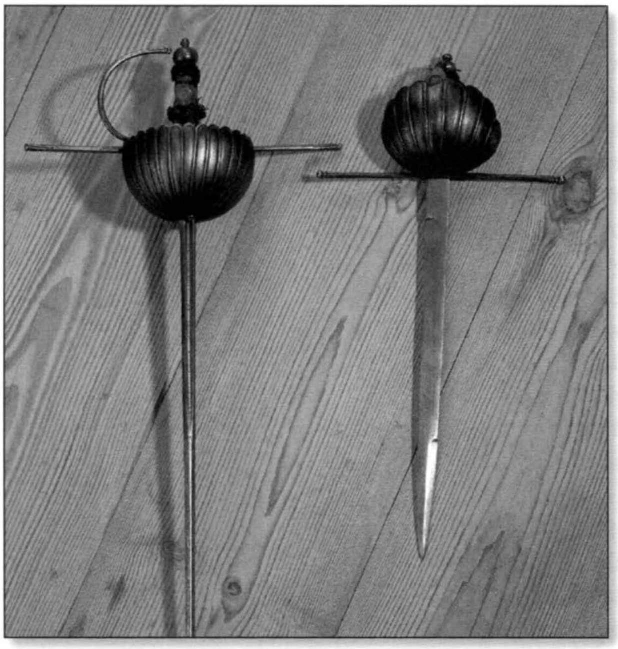
---

[72] Norberg, *Polen*, pp.201, 205, 207.

[73] See for example, letter to Colonel Hans Georg von Arnim, 28 February 1628 (No. 169), reprinted in Friedrich Förster (ed.), *Albrechts von Wallenstein, des Herzogs von Friedland und Mecklenburg, ungedruckte, eigenhändige vertrauliche Briefe und amtliche Schreiben aus den Jahren 1627 bis 1634*, Vol. 1 (Berlin: G. Reimer, 1828), p.314.

[74] Geoffrey Parker, *The Thirty Years' War* (np: Barnes & Noble, 1993), 79, pp.104–5; McNair, *Struggle for Stralsund*, p.13.

[75] Östergren, *Sigismund*, p.149; citing Ryszard Skowron, 'Polsko-hiszpańskie projekty inwazji na Szwecję w okresie panowania Zygmunta III i Władysława IV / Polish-Spanish Projects of Invasion of Sweden in the Times of Sigismund III and Ladislaus IV', Daniela Galas (ed.), *Stosunki polsko-szwedzkie w epoce nowożytnej / Polish-Swedish Relations from 16th to 18th Centuries: Materiały sesji Warszawa, grudzień 1999* (Warsaw: Zamek Królewski, 2001), pp.31–46.



Nils Brahe's cup-hilt rapier and main-gauche, 1620s. (Skokloster Castle)

the southern Baltic, and in September the same year, Swedish and Imperial warships engaged in battle off Wismar (the Imperial squadron was driven back into port).[76] In October 1629, following the Commonwealth–Swedish Truce of Altmark (see below), Gustavus Adolphus discussed the possibility of taking control over Wismar (which he eventually did, but only in January 1632).[77]

By the decision of Gustavus Adolphus to relieve Stralsund, Sweden joined the broader war in Germany, which henceforth would demand most of his attention. It would be incorrect to assess Gustavus Adolphus's decision as either an exclusively political or purely a confessional matter. The decision was motivated by both, since at the time both goals were widely regarded as integrated. Gustavus Adolphus concluded that 'all the wars in Europe have merged and become one.'[78] The Protestant cause was important for Gustavus Adolphus, but it was not the overriding one.[79] Besides, the war against the Commonwealth was not yet over.

The End of the War in Prussia

In February 1629, Field Marshal Herman Wrangel moved against the Commonwealth army of Stanisław 'Rewera' Potocki (1589–1667) at Górzno. Wrangel brought some 6,000 men (2,416 infantry, 3,400 cavalry, 200 dragoons, and six cannons). Potocki had about the same number (600 infantry, 5,400 cavalry, and four cannons).[80] The perhaps most notable characteristic of Wrangel's army was that over half of it consisted of cavalry. Besides, of his infantry, all were musketeers. At the subsequent battle of Górzno (actually Zaborowo), Potocki, on one side of the River Printzel (Brynica), rashly allowed Wrangel's army to cross (the foot across the ice) before engaging in battle, since he trusted his cavalry and aimed for a decisive victory. Although the Commonwealth infantry performed well, the Swedish cavalry reinforced with musketeers and some artillery in a combined arms operation that foreshadowed Gustavus Adolphus's later operations in Germany pushed back first the regular Commonwealth cavalry, and then the Polish hussars, too. The Swedish cavalry then turned, threatening the Commonwealth infantry in the rear. The Commonwealth forces lost an estimated 1,500 men while Swedish losses were 30 dead and 60 wounded.[81]

---

[76] *Sveriges krig*, Suppl. Vol. 1, pp.202–5.

[77] Michael Roberts, 'The Political Objectives of Gustavus Adolphus in Germany, 1630–1632', *Transactions of the Royal Historical Society* 7 (1957), pp.19–46, on p.19.

[78] Gustavus Adolphus to Oxenstierna, 1 April 1628 (O.S.), in Styffe, *Konung Gustaf II Adolfs skrifter*, pp.515–23, on p.516.

[79] Ahnlund, *Gustav Adolf*, p.224.

[80] *Sveriges krig* 2, pp.439–40, 442–3; Hedberg, *Kungl. Artilleriet*, pp.212–14.

Wallenstein had already since autumn 1628 entertained plans to send reinforcements to Sigismund. However, the Commonwealth parliament had been reluctant to strengthen Sigismund's already limited powers. Following the defeat at Górzno, the attitude changed, and it was agreed that the Empire would send 10,000 men to assist him. In May 1629 Wallenstein's field marshal, Arnim, marched to the Commonwealth with six infantry regiments, seven cavalry regiments, and 7–8 cannons. The effective strength of his expeditionary corps, when it set out, was at least some 16,000 men.[82]

Arnim had previously been in Swedish service, which he entered in 1613. Except for a brief period in 1621–1622 when he was in Commonwealth service against the Ottomans, he prospered in Swedish service, eventually serving as colonel of the Blue Regiment. Arnim went into Imperial service in 1626. He knew the Swedish and Commonwealth armies well and he also knew Gustavus Adolphus's tactical doctrine.

Despite mistrust between the Commonwealth and Imperial forces, Arnim and Koniecpolski in time worked out a common plan. On 25 June, they united their forces in Graudenz (modern-day Grudziądz). Arnim and Koniecpolski decided to cut Gustavus Adolphus's line of communications to the north. The combined Commonwealth–Imperial army then consisted of some 13,500 infantry, 6,500 cavalry, and 350 dragoons, or, in total, some 20,000 men.

Gustavus Adolphus received intelligence on the joint Commonwealth–Imperial operations and, correctly, deduced that they attempted to cut him off from the north. However, he misjudged which route Arnim and Koniecpolski would choose. Gustavus Adolphus moved north towards Stuhm with his 1,300 foot and 5,400 horse, or, in total, 6,700 men, until the two armies on 27 June encountered each other at Honigfelde (modern-day Trzciano; the Swedes mistakenly called the engagement the battle of Stuhm). The Swedish King rapidly ordered a delaying action so as to enable the retreat of his units. The situation was critical, but the Swedish units handled it well. Gustavus Adolphus saved most of the army but lost his hat, which the Imperials took as a trophy. The Swedes also lost 10 cannons and 10 standards. Casualties were not very large, however. Swedish losses included 200 dead including six captains. Commonwealth and Imperial losses were insignificant. Despite the successful withdrawal of most units, the battle can only be called a Swedish defeat. Gustavus Adolphus later described the battle in the following words: 'Never have I experienced a hotter bath!'[83]

At Honigfelde, the Swedish cavalry was caught on the march and had to fight without the supporting fire of musketeers and regimental artillery. As a result, they charged the Polish hussars in close order, firing their pistols just before impact, and then continued the combat with rapiers. Although this actually worked well at Honigfelde, Gustavus Adolphus regarded such tactics, without proper fire support, as too risky and henceforth increased efforts to provide his cavalry with such support.[84] Paradoxically, it was just this kind of aggressive cavalry charge that, after the reign of Gustavus Adolphus, would become the hallmark of the Swedish cavalry.

---

[81] *Sveriges krig* 2, pp.444–50; *Kungl. Svea livgardes historia* 3:1, pp.566–75.

[82] *Sveriges krig* 2, pp.453.

[83] *Ibid.*, pp.528–41; *Kungl. Svea livgardes historia* 3:1, pp.591–8.

After the defeat at Honigfelde, the war in Prussia ended in strategic stalemate, with neither Swedes nor Commonwealth forces capable of gaining a decisive victory. In July, Arnim and Koniecpolski first attempted a siege of Marienburg, then, in August, an operation against Königsberg. Both failed.[85] Gustavus Adolphus could hold the towns that he had conquered, but he lacked supplies. The country had been ruined by the devastation caused by the movements of the opposing armies and the raiding and deliberate destruction of supplies by the Commonwealth commanders. As a result, Gustavus Adolphus had to provide supplies from the Swedish mainland which the country ill could afford, and still was unable to break the will of the Commonwealth commanders and their Imperial allies to fight. The Commonwealth, meanwhile, lacked the men successfully to go on the offensive against the encamped Swedish field army. It was a stalemate. In September 1629, Sweden and the Commonwealth concluded the six-year Truce of Altmark with the Polish-Lithuanian Commonwealth. France, England and the Dutch Republic all pushed for a truce. It could be no more than a truce, since Sigismund refused to abandon his claim to the Swedish throne (and his descendants did not surrender that claim until 1660). The truce left Sweden in de facto control of Livonia north of the River Dvina. The Swedes also retained the important Royal Prussian towns of Braunsberg, Frauenburg, and Elbing. In addition, Sweden received the East Prussian towns of Pillau, Fischhausen (modern-day Primorsk), Lochstädt (modern-day Pavlovo), and Memel (modern-day Klaipeda) from Brandenburg until a more permanent peace could be arranged. Yet more importantly, Sweden acquired the right to the main share of the toll levied on the Danzig trade, as well as the tolls from the Courland ports of Libau (modern-day Liepāja) and Windau. The tolls constituted a desperately needed cash income. It was also a substantial one; most of the 1,500 or so merchant ships that entered the Baltic each year were bound for the ports of Danzig, Königsberg, and Elbing, and the tolls corresponded to one-third of Sweden's then total revenues.[86]

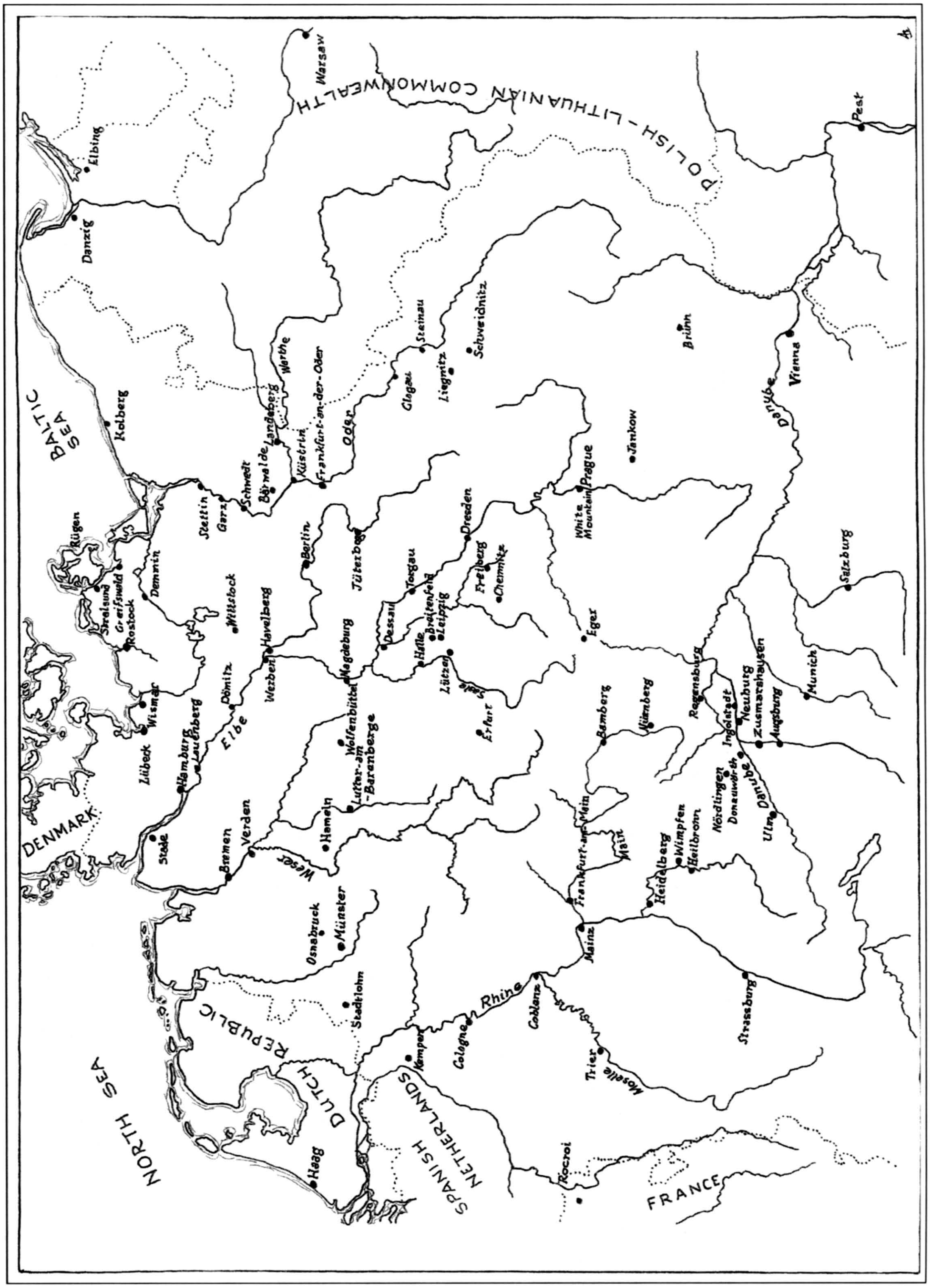
Furthermore, the ongoing Imperial offensive towards the north German coastline had persuaded the French and Dutch governments to offer financial subsidies as an incentive for Gustavus Adolphus to invade the Empire. He was willing to oblige them. Taking into account the activities of King Sigismund in the Commonwealth and his links to the counter-reformation and the house of Habsburg, it was easy to portray an offensive in Germany as in defence of the Protestant faith. Besides, as we have seen, control of the river outlets into the Baltic reduced the risk for what Sweden considered the greatest threat: a Commonwealth invasion fleet. Besides, it was cheaper to fight a defensive war on foreign territory, since most of the costs could then be defrayed by

---

[84] *Kungl. Svea livgardes historia* 3:1, p.598.

[85] *Sveriges krig* 2, pp.543–50; *Kungl. Svea livgardes historia* 3:1, pp.606–11.

[86] Parker, *Thirty Years' War*, p.123; with references.


POLISH-LITHUANIAN COMMONWEALTH
Warsaw
Pest
Elbing
Danzig
BALTIC SEA
Kolberg
Rügen
Stralsund
Greifswald
Rostock
Demmin
Wismar
Lübeck
Hamburg
Lauenberg
DENMARK
Stade
Bremen
Verden
Weser
Elbe
Dömitz
Wittstock
Havelberg
Werben
Stettin
Gartz
Schwedt
Bärwalde
Landsberg
Küstrin
Frankfurt-an-der-Oder
Oder
Warthe
Glogau
Steinau
Liegnitz
Schweidnitz
Brünn
Berlin
Jüterbog
Torgau
Dessau
Magdeburg
Halle
Breitenfeld
Leipzig
Lützen
Saale
Erfurt
Dresden
Freiberg
Chemnitz
White Mountain
Prague
Jankow
Eger
Danube
Vienna
Salzburg
Munich
Regensburg
Ingolstadt
Neuburg
Zusmarshausen
Augsburg
Nördlingen
Donauwörth
Danube
Ulm
Bamberg
Nürnberg
Wolfenbüttel
Lutter-am-Barenberge
Hameln
Main
Frankfurt-am-Main
Main
Wimpfen
Heilbronn
Heidelberg
Mainz
Strassburg
Rhine
Coblenz
Cologne
Kemper
Trier
Moselle
Osnabruck
Münster
Stadtlohn
NORTH SEA
DUTCH REPUBLIC
Haag
SPANISH NETHERLANDS
Rocroi
FRANCE

Map 5. Germany

passing the burden onto the shoulders of the enemy and his population. Like other Thirty Years' War commanders, Gustavus Adolphus argued that *bellum se ipsum alet* ('war feeds itself').[87] In May 1630, when the planned offensive in Germany was discussed in the Swedish parliament, a peasant representative expressed the same concept but in the language of the common people, arguing that it was better 'to tie our horses in the enemy's farmsteads than he in ours'.[88] Foreign subsidies could be acquired, too, as a further boon, and France, England, and the Dutch Republic each offered the provision of monetary support. Sweden was not alone in drawing these conclusions, which became commonplace during the Thirty Years' War (and indeed in other conflicts), but for the Swedish ability to wage war they were compelling, not only convenient, in the formulation of national strategy.

The Invasion of Pomerania

Following parliamentary approval, Gustavus Adolphus mustered his army near Stockholm in June 1630, and then embarked with his men for the voyage to Germany on some 25 warships and more than 75 other ships and transports, accompanied by merchant ships with supplies.[89] He had also made arrangements for reinforcements to be shipped from Norrköping, Söderköping, Västervik, and Kalmar in Sweden, and from Åbo (modern-day Turku) in Finland, Reval in Estonia, Riga in Livonia, Pillau in Prussia, and Stralsund in Germany. All available forces would be needed.

For national defence in his absence, Gustavus Adolphus left Grand Marshal of the Realm Jacob De la Gardie, Field Marshal Herman Wrangel, and his brother-in-law, John Casimir, Count Palatine of Pfalz-Zweibrücken-Kleeburg (1589–1652), who previously had played a home defence role when the King went on campaign and De la Gardie was busy elsewhere (incidentally, John Casimir was the father of a seven-year-old boy who in time would become a noted military commander and eventually the future king, Charles X Gustavus). Finland was left in the hands of the aged and ill-tempered Governor-General, Nils Turesson Bielke (1569–1639), while the King's old tutor, Governor-General Johan Skytte (1577–1645), was responsible for Livonia, Ingria, and Karelia. Estonia was left in charge of Governor Philip von Scheiding (1578–1646). Axel Oxenstierna personally took charge of Prussia.[90] Both Skytte and Oxenstierna were very suspicious of Muscovy. Their views and geographical location soon came to influence Sweden's relations with the eastern neighbour.

The Swedish Military Archives still contains muster rolls and similar documentation that enables a detailed and essentially exact reconstruction of Sweden's total military forces at the time. Minor discrepancies cannot

---

[87] Gustavus Adolphus to Oxenstierna, 1 April 1628 (O.S.), in Styffe, *Konung Gustaf II Adolfs skrifter*, pp.515–23, on p.520.

[88] Peter Englund, *Ofredsår* (Stockholm: Atlantis, 1993), p.73.

[89] *Sveriges krig* 3, pp.577–9; *Sveriges krig*, Suppl. Vol. 1, pp.211–6, 262–3.

[90] *Sveriges krig* 3, pp.274, 276.

Table 1. Total Swedish military forces, June 1630 (based on figures in *Sveriges krig* vol. 3, pp.569–71, 576, which also provides a list of all units)

Deployment	Infantry	Cavalry	Dragoon	Artillery	Total
Gustavus Adolphus's expeditionary force					
Stockholm	10,400	2,750	50	400	13,600
Åbo	3,750	1,600	-	-	5,350
Reval and Riga	1,050	950	-	-	2,000
Pillau	7,200	4,000	150	-	11,350
Stralsund	5,200	500	50	-	5,750
Total	27,600	9,800	250	400	38,050
Homeland defence:					
Sweden	12,800	2,750	-	300	15,850
Finland	5,450	1,000	-	-	6,450
Estonia, Livonia, Ingria	3,650	750	100	100	4,600
Prussia	6,500	500	400	100	7,500
Grand total	56,000	14,800	750	900	72,450

be avoided. Not all units took their roll calls on the same date and numbers certainly changed due to casualties, attrition, and the arrival of reinforcements. Moreover, cavalry units counted their strength in horses, not men. Nonetheless, it can be calculated that the total Swedish military establishment at the time of Gustavus Adolphus's expedition to Germany consisted of some 72,450 men. Sweden had never before had that many men under arms. Of these, about 55 percent were of national origin while 45 percent were enlisted elsewhere.[91]

Based on actual deployment, the Swedish military forces then under arms were distributed as in Table 1.

Despite having Swedish troops under Alexander Leslie already in place in Stralsund and on the nearby island of Rügen, Gustavus Adolphus did not land there but instead sailed to the River Oder estuary. He knew from previous campaigns that river transportation was more reliable and faster than overland travel. He would need to move both siege artillery and supplies further into Germany, and the river would enable the supplies to follow the army. On 6 July 1630, the Swedish fleet cast anchor off the island of Usedom at the Oder estuary. Gustavus Adolphus and the Swedish army landed at

---

[91] *Kungl. Svea livgardes historia* 3:1, p.616. These authors worked with a slightly different set of figures: 38,772 of national origin and 32,536 enlisted, producing a total of 71,308 men.

Peenemünde, where they quickly established a fortified camp.[92] Gustavus Adolphus personally reconnoitred the coastline in a small boat in the night before landing.[93]

One personnel category was conspicuously missing in the expeditionary force that followed Gustavus Adolphus from Stockholm: there were no cuirassiers. This was, no doubt, a cause for concern when going to war in Germany. Gustavus Adolphus had ordered nine cuirassier companies from Livonia and four from Sweden, but they arrived only later.[94] In fact, shipping capacity was insufficient to embark all units that had been raised. In Finland, for instance, 12 companies of Finnish cavalry, divided into three squadrons under lieutenant colonels Hans Ekholt, Torsten Stålhandske, and Heinrich Nöding, were supposed to join, but because of a shortage of ships, only seven companies could be transported and they arrived late. Ekholt's squadron had to wait until the following year.[95] As a result, it took time before the expeditionary force reached its planned strength.[96]

Besides, as in any campaign, attrition soon set in. In November 1630, the Swedish field army consisted of 29,000 men (of whom 9,000 were too ill to fight), with another 13,000 deployed as garrisons in nine Pomeranian towns.[97] It was not only to control territory that men were detached on garrison duty. Logistics prevented the deployment of too many men in one location, since they soon would exhaust available supplies. This was a fact of life for all armies at the time. While the strength of the assembled masses of men would grow very great during the Thirty Years' War, the field armies that engaged in operations in most cases remained far smaller, as we will see.

Immediately upon arrival in Germany, Gustavus Adolphus issued a *Kriegsmanifest*, in which he set out his complaints. Editions were published in various languages, including Latin. After a discussion of Stralsund and Wallenstein's activities, Gustavus Adolphus complained about his letters having been intercepted, opened, and deciphered. Goods had been stolen, and trade had been interfered with. Gustavus Adolphus also criticised the plan to establish an Imperial naval base in the Baltic. Finally, and with certain discretion, he accused the Emperor of suppressing German liberties, which in light of its constitutionalist stance had been a recurring Protestant claim in the previous phases of the war.[98] There was, in other words, no formal claim of assuming the leadership of the Protestants in a religious war. Besides, he had only limited support from the German states. Only the dispossessed dukes Adolph Frederick and John Albert of Mecklenburg, William and Bernard of Saxe-Weimar, George of Brunswick-Lüneburg, Landgrave William of Hesse-Kassel, and the town of Magdeburg, which was directly threatened by Imperial troops, over the next few months expressed support for Gustavus Adolphus. Among foreign powers, only Muscovy offered real support, in the form a license to export grain from Narva to Amsterdam duty free.[99] In return, Gustavus Adolphus assisted Tsar Michael Romanov in modernising the Muscovite army by sending officers for the Tsar's 'new formation regiments' which were first set up in 1630. He also undertook to enlist an army in Germany, paid for by Muscovy and on behalf of the Tsar, which he would then send against the Commonwealth.[100] At the time, Muscovy was the only ally that actually provided a degree of support. The reason for this was, as in the past, the common interest of Sweden and Muscovy in reducing the threat from the Commonwealth. A year later, after the Swedish victory at Breitenfeld, Moscow, too, celebrated the victory, and the Tsar did so, apparently for the first time in the country's history and following a Swedish suggestion, by firing guns in salute of the victory.[101]

---

[92] *Sveriges krig* 3, pp.399–402.

[93] Erik Zeeh and Nils Belfrage (eds), *Dagbok förd i det svenska fältkansliet 26 maj 1630–6 november 1632 (Journal de Gustave Adolphe)*(Stockholm: Historiska handlingar 30:3, 1940), 3, p.14.

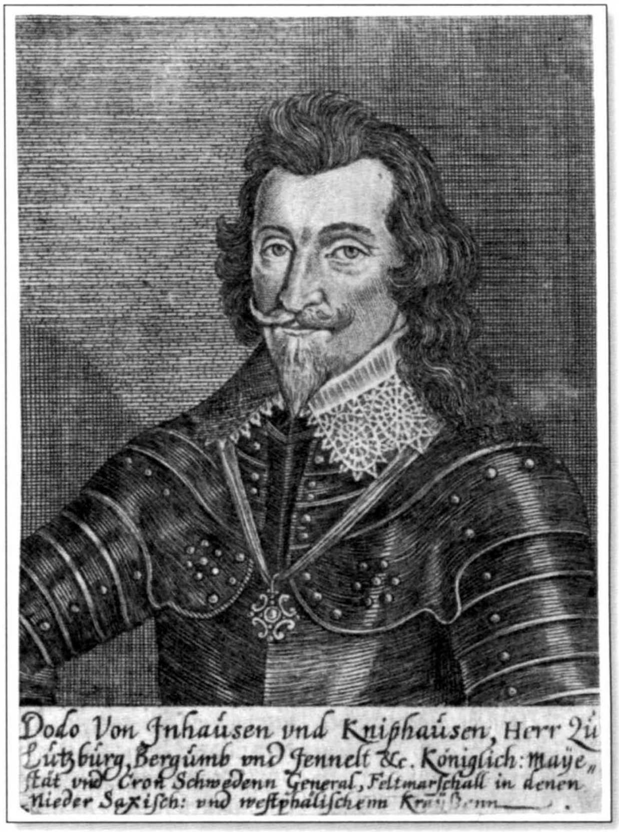
[94] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.118.

[95] Sebastian Jägerhorn, *Hårdast bland de hårda: En kavalleriofficer i fält* (Stockholm: Medströms, 2018), p.87.

[96] *Sveriges krig* 3, pp.580, 582–3.

[97] Ericson, *Krig och krigsmakt*, p.116; Lars Ericson Wolke, Göran Larsson; and Nils Erik Villstrand, *Trettioåriga kriget: Europa i brand 1618–1648* (Lund: Historiska Media, 2006), p.265.

[98] Gustavus Adolphus, *Kriegsmanifest*, July 1630. Reprinted as 'Das schwedische Kriegsmanifest vom Juli 1630, Flugschrift, 1630', Themenportal Europäische Geschichte, 2006 <www.europa.clio-online.de/quelle/id/q63-28306>.


Dodo Von Inhaúsen vnd Kniphaúsen, Herr Zu
Lützbürg, Bergúmb vnd Jennelt &c. Königlich: Maye,
ſtät vnd Cron Schwedenn General, Feltmarſchall in denen
Nieder Saxiſch: vnd weſtphäliſchem Kreÿßenn .

Dodo von Innhausen und zu Knyphausen.

At first, enemy opposition was limited. There was an Imperial army in northern Germany, with headquarters in Gartz on the River Oder under Field Marshal Torquato Conti (1591–1636), but he was unable to concentrate his forces for supply reasons. On 20 July 1630, the Swedes took Stettin, which enabled the collection of tolls on the River Oder trade.[102] On 25 August, a Swedish army of 5,105 men under the old general Dodo von Innhausen und zu Knyphausen (1583–1636) took Wolgast.[103] Knyphausen was a skilled soldier who, in addition to an early acquaintance with Gustavus Adolphus (more on which below), had fought in a variety of armies, including in Dutch service from 1602, then under Ernst von Mansfeld (*c.* 1580–1629) – a prominent commander who despite being a Catholic served on the side of the Bohemian Revolt in the early stages of the Thirty Years' War – and finally in English service during which Knyphausen raised troops for the 1928 attempt to raise the siege of La Rochelle, before he

---

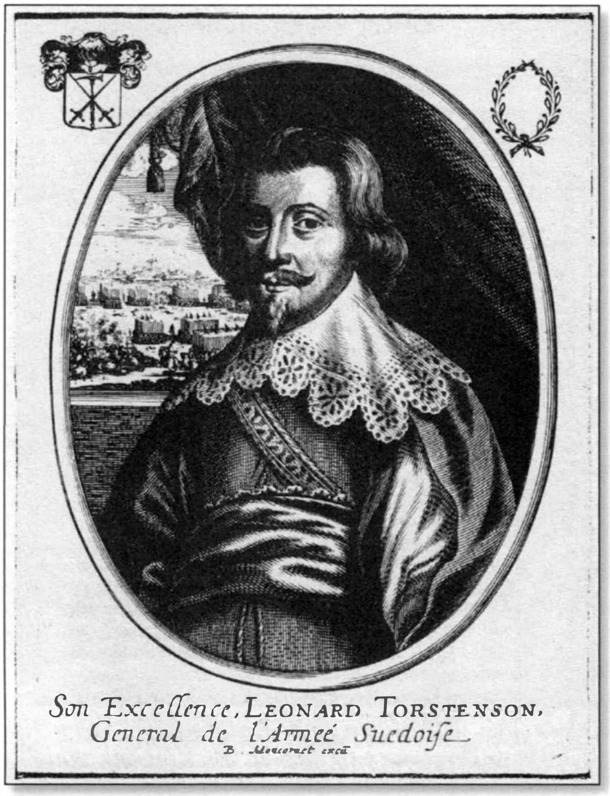
[99] The grain subsidy lasted from 1628 to 1633. B.F. Porshnev, *Muscovy and Sweden in the Thirty Years' War, 1630–1635* (Cambridge: Cambridge University Press, 1995), pp.38–62.

[100] *Ibid.*, pp.82–3, 162.

[101] *Ibid.*, pp.119–20.

[102] *Sveriges krig* 3, pp.415–18.

[103] *Ibid.*, pp.433–7.


Son Excellence, LEONARD TORSTENSON,
General de l'Armeé Suedoise
B. Moncornet excu

Lennart Torstensson.

again had gone into Swedish service. He was one of the most experienced officers in the Swedish army.

The War in Northern Germany

In September and October 1630, Gustavus Adolphus led the field army to the west, into Mecklenburg. His aim was to secure the coast, if possible all the way to Rostock and, beyond that, River Elbe. In the end, he did not reach further than Riebnitz, which he took in October. He left Field Marshal Gustav Horn in charge of defending Pomerania.

The first real battle between Swedish and Imperial troops in Germany took place at Falkenberg in late November 1630. The Swedes, under Horn, retained the field, but they lost some 400 men, the Imperials, under Hieronymus von Colloredo (1582–1638), somewhat less. Tactically, the Imperial troops succeeded in covering their withdrawal, but strategically, their retreat was a Swedish victory.[104] By then, Gustavus Adolphus had returned from his short incursion into Mecklenburg. He now led the Swedish army against the Imperial camp at Gartz. In early January 1631, in what became known as the battle of Marwitz, the Swedes in a combined attack by Teuffel (Yellow Regiment), Leslie (Oder Flotilla), Baudissin (cavalry), and Torstensson (artillery) in a desperate engagement disrupted an Imperial contingent at Greifenhagen under Fernando de Capua, who was mortally wounded.[105] Of the Swedish commanders, the one who in time would become most noted was the youngest, Lennart Torstensson (1603–1651), who had fought under Gustavus Adolphus since 1621. He had since then worked to develop the Swedish artillery, a task in which Gustavus Adolphus had taken a keen interest.

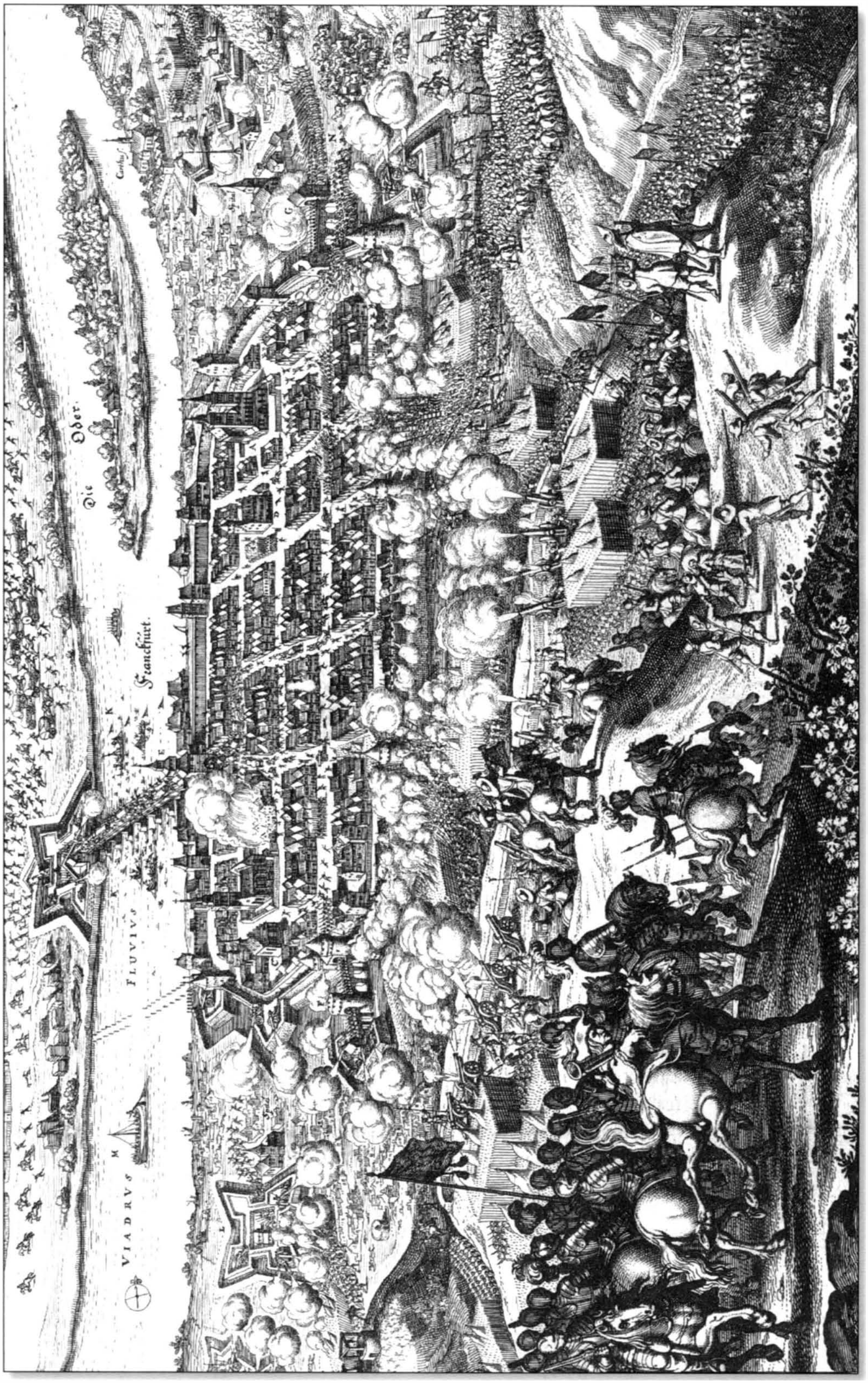
In January 1631, France in the Treaty of Bärwalde promised to provide Sweden with 120,000 Riksdalers (the Swedish equivalent of the *Reichsthaler*) for 1630 and then 400,000 Riksdalers annually for the next five years to subsidise Sweden's war effort, to be paid in instalments at Paris or Amsterdam on 15 May and 15 November each year.[106] In return, Sweden promised to maintain 30,000 foot and 6,000 horse in Germany. The subsidy was important but not critical. In comparison, Sweden paid an estimated

---

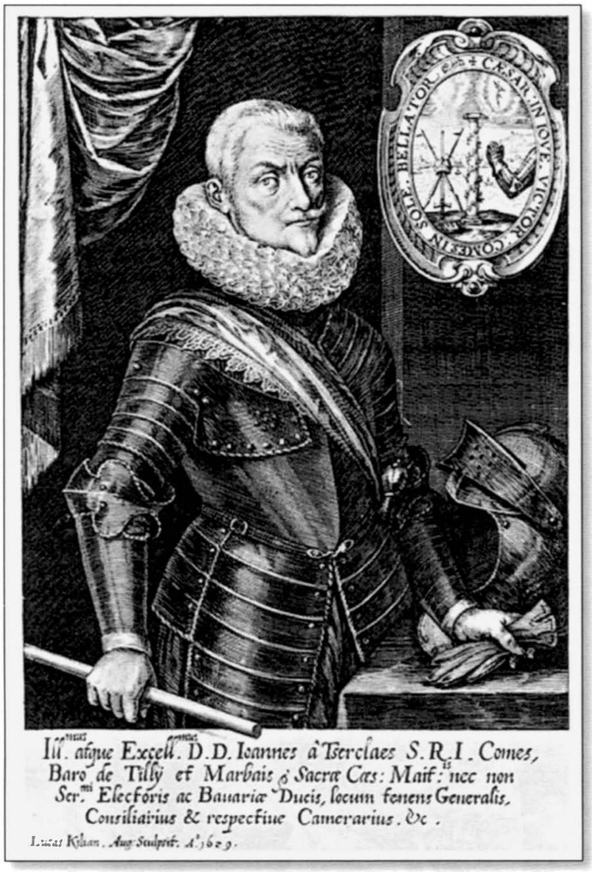
[104] *Ibid.*, pp.486–8; *Kungl. Svea livgardes historia* 3:1, p.635.

[105] *Sveriges krig* 3, pp.504–10; *Kungl. Svea livgardes historia* 3:1, p.637.

[106] Michael Roberts, *Sweden as a Great Power 1611–1697: Government; Society; Foreign Policy* (London: Edward Arnold, 1968), pp.136–8, on p.137.


Die Oder
Franckfurt
VIADRVS FLVVIVS

Gustavus Adolphus conquers Frankfurt-an-der-Oder, 1631. (***TheatrumEuropaeum***; photo: Medströms)


Ill.^mus atque Excell.^mus D.D. Ioannes à Tserclaes S.R.I. Comes,
Baro de Tilly et Marbais, Sacræ Cæs: Maiª:^tis nec non
Ser.^mi Electoris ac Bauariæ Ducis, locum tenens Generalis,
Consiliarius & respectiue Camerarius. &c.
Lucas Kilian. Aug: Sculpsit. A.° 1629.

Johann t'Serclaes von Tilly, 1629. (Photo: Medströms)

2,200,000 Riksdalers for its war effort between May 1631 and April 1632.[107]

Meanwhile, Gustavus Adolphus carried out a second incursion into Mecklenburg, and took Demmin in late February. However, Johan Jacob Wildeisen, by then lieutenant colonel of the Yellow Regiment (Household Regiment) and six years previously the King's captain-lieutenant of the Life Guard, fell in the battle.[108]

In early 1631, Gustavus Adolphus commanded some 20,000 men (of whom some 6,000 were too ill to fight), while 18,000 were deployed in garrisons.[109] Losses from disease had decreased the number of men further.

While the King led the field army deeper into Germany, the Pomeranian garrisons secured his supply lines. In addition, Oxenstierna advised the formation of a second army along the River Oder, so as to secure the border with the Commonwealth. Gustavus Adolphus followed a cautious strategy. As in his previous campaigns, the army halted at regular intervals to build fortified camps. Generally speaking, Gustavus Adolphus fortified every camp in which he intended to remain for more than one night or when the enemy was near; he did not wish to risk the chance that enemy forces attacked his rear. Nobody was more aware than Gustavus Adolphus of the strength of the combined forces of the Empire and Catholic League, and the brittle character of the alliance that he was building in northern Germany. The Swedes first advanced south until Frankfurt-an-der-Oder, which was taken on 13 April.[110]

Gustavus Adolphus made no real attempt to relieve Magdeburg on the Elbe further to the west, which was a mostly Protestant town under siege by the Catholic League commander-in-chief, Johann t'Serclaes von Tilly (1559–1632). Magdeburg was too far away. On 20 May, Tilly's men successfully stormed the town, then he lost control of his men. The fall of Magdeburg turned into a bloodbath of a magnitude that shocked every observer, however used to the ravages of war they might be. The town burned to the ground. The story goes that Tilly, too, cried when he saw the devastation unleashed by his men. He also must have realised that the fire cost him the opportunity to use the town as a base for further operations, which was his original plan.

---

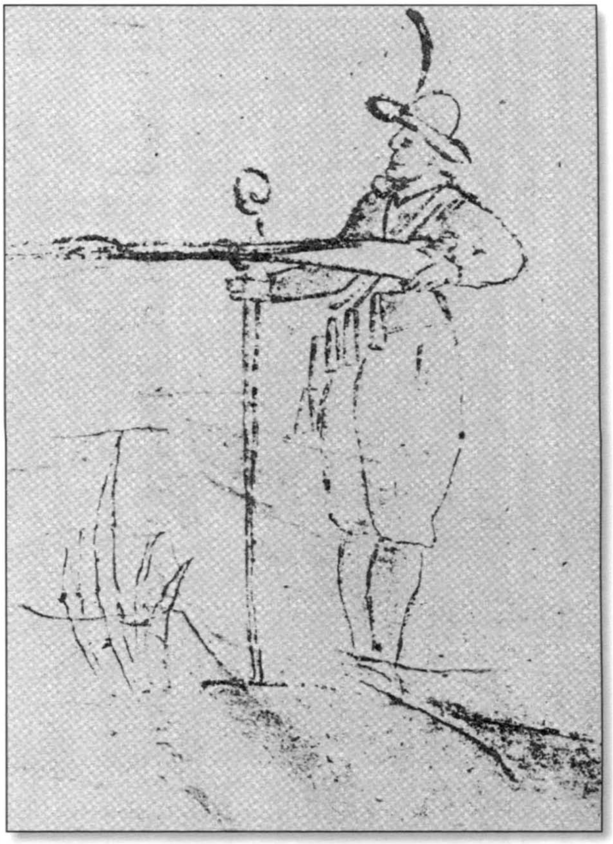
[107] Englund, *Ofredsår*, p.101.

[108] *Sveriges krig* 4, pp.36–48; *Kungl. Svea livgardes historia* 3:1, p.640.

[109] Ericson, *Krig och krigsmakt*, p.116; Ericson Wolke, Larsson; and Villstrand, *Trettioåriga kriget*, p.265.

[110] *Sveriges krig* 4, pp.127–42; *Kungl. Svea livgardes historia* 3:1, pp.648–51.

Musketeer firing his musket, 1630. Etching from Erik Soop's pewter coffin, Skara Cathedral. One of few known Swedish depictions from the time. Erik Soop (1592-1632), then lieutenant colonel of the Västgöta Cavalry Regiment, once saved Gustavus Adolphus from capture during the war in Livonia, or at least this was a well-known story at the time, even though no details now can be confirmed. The incident probably took place in 1627, when Soop was knighted for bravery (Ahnlund, Gustav Adolf, p.98). In the following year, Soop was promoted to colonel and head of the Västgöta Cavalry Regiment.



Eventually the Swedish army moved towards, and crossed, the River Elbe, after which Gustavus Adolphus established a fortified camp at Werben.[111] Banér stormed neighbouring Havelberg in late July. Soon the Swedes took up positions which enabled them to dominate military operations in Brandenburg. Meanwhile, Åke Tott (1598–1640) moved an expeditionary force of 3,000 foot and 1,900 horse into Mecklenburg to impose a blockade on Rostock and Wismar.[112]

By the end of July, Gustavus Adolphus's field army had shrunk to 8,698 foot, 6,053 horse, and 364 dragoons, that is, a total of 15,115 men;[113] then Tilly moved against his camp at Werben and sent an advance cavalry force of 1,100 horse which took up positions in the area around Burgstall. As a result, Gustavus Adolphus personally assumed command of a force consisting of an unknown but significant number of cavalry. Essentially, it was a reconnaissance-in-force operation to probe the enemy's disposition. Locating Tilly's advance force, Gustavus Adolphus decided to attack, not least to snatch prisoners for interrogation on Tilly's strength. On 27 July, the Swedish cavalry successfully attacked Tilly's force, then divided into three groups in the Burgstall area.[114] The engagement was hard fought, however, and at one point, Gustavus Adolphus apparently was at risk of being captured by Pernstein's Cavalry Regiment. He was saved by a company of the Västgöta Cavalry Regiment, led by Harald Stake (1598–1677), a veteran of Dutch service (in 1622, Stake had reportedly saved the Duke of Brunswick from the Spaniards at Fleurus). Charging into the Imperial regiment, Stake singlehandedly shot dead the Imperial colonel, Wratislaw von

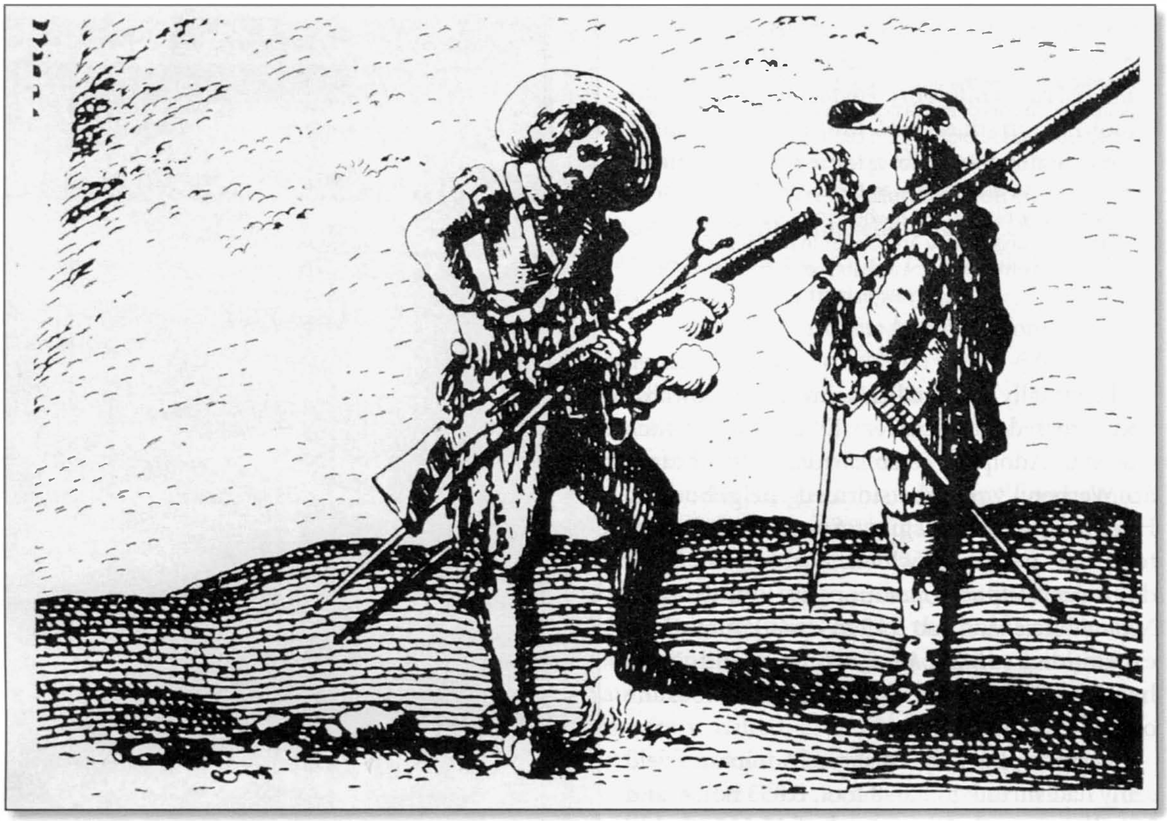
---

[111] *Sveriges krig* 4, pp.379–83.

[112] *Ibid.*, pp.354–5.

[113] *Ibid.*, pp.387–8.

[114] *Ibid.*, pp.383–5.



Swedish musketeers at the conquest of Frankfurt-an-der-Oder, 1631. They wear jackets with protruding shoulder straps. One wears breeches and stockings, the other breeches and boot stockings in his shoes. One wears his hat with a turned-up brim on the left side. (Franz Hogenberg, Rijksmuseum, Amsterdam)

Pernstein.[115] Otherwise, casualties were small on both sides, but the Imperial cavalry withdrew, abandoning its baggage.[116]

Tilly in early August twice attacked Gustavus Adolphus's camp at Werben, with artillery fire and cavalry skirmishes, attempting to provoke the Swedish King into bringing out his forces for an open battle.[117] When Gustavus Adolphus wisely refused, Tilly instead moved into Saxony to force John George, the Elector of Saxony, to join the Imperial cause. This turned out to be a mistake. Following Tilly's failure at Werben, William, Landgrave of Hesse-Kassel (1602–1637), joined the Swedish alliance. Then, as Tilly ravaged Saxony, John George, too, asked for Swedish support. In September 1631, the Swedish and Saxon armies joined forces. As a result, Tilly deployed his army at Breitenfeld, a short distance north of Leipzig, on 17 September.

The Battle of Breitenfeld

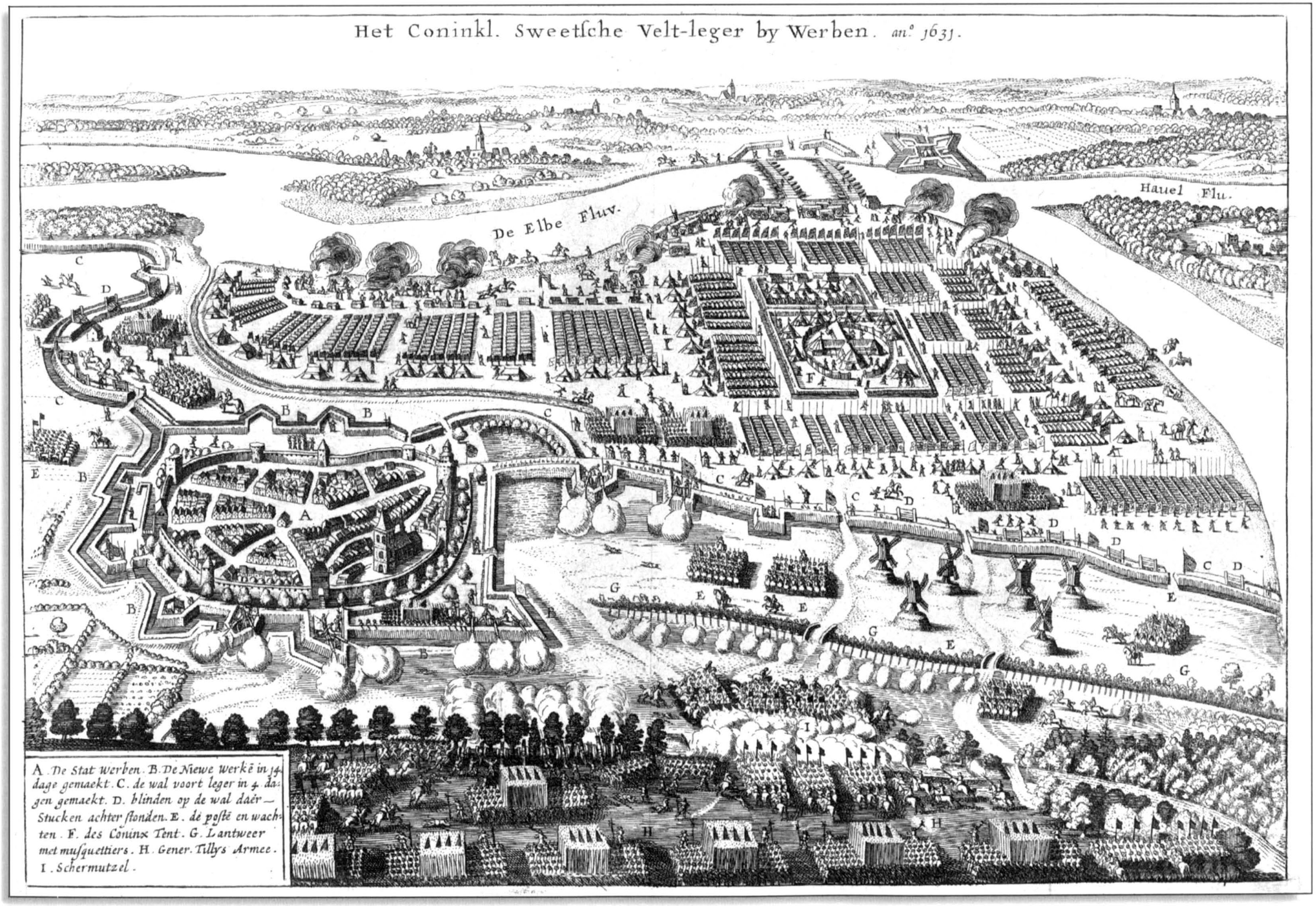
In early September, Gustavus Adolphus controlled three field armies in Germany. His main army, in northern Saxony, consisted of 23,900 men. In

---

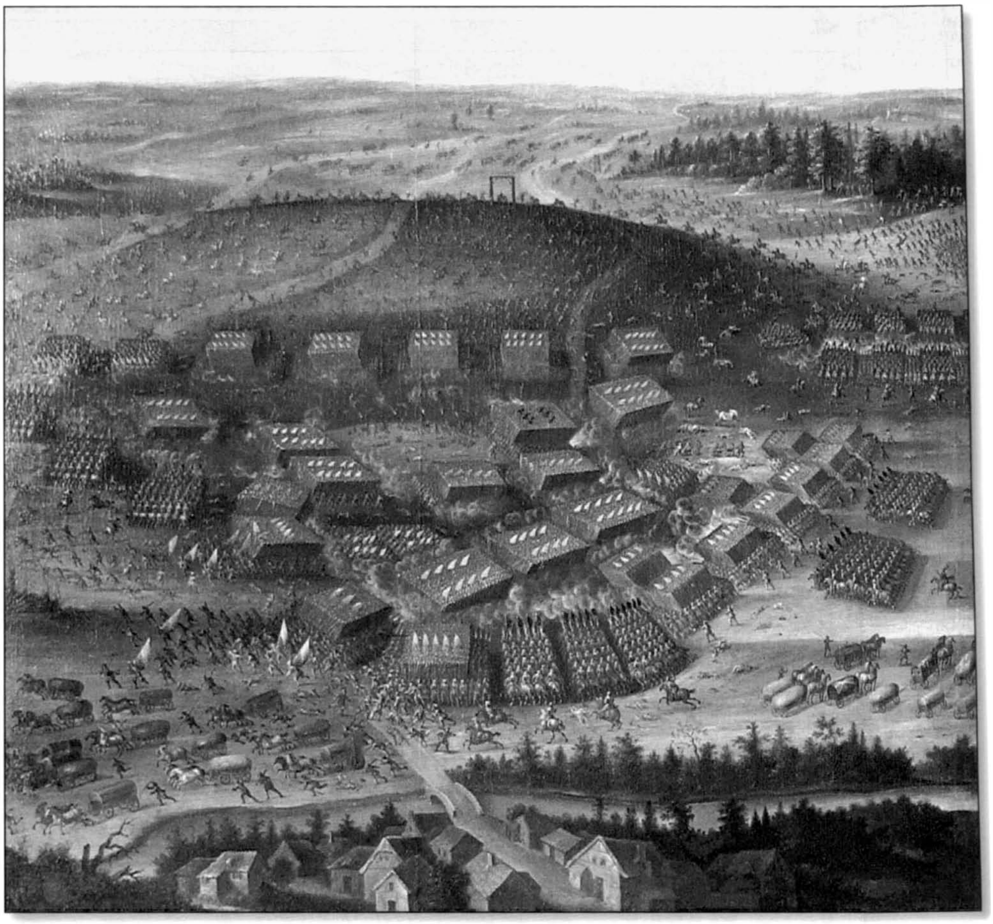
[115] John Rumenius, *Wästgöta Ryttare i 30:åriga kriget:1000 frivilliga bönder drar ut i kriget 1630* (Stockholm: Nyblom, 1987), 34, pp.138–9.

[116] Zeeh and Belfrage, *Dagbok förd i det svenska fältkansliet*, p.21.

[117] *Sveriges krig* 4, pp.392–5.

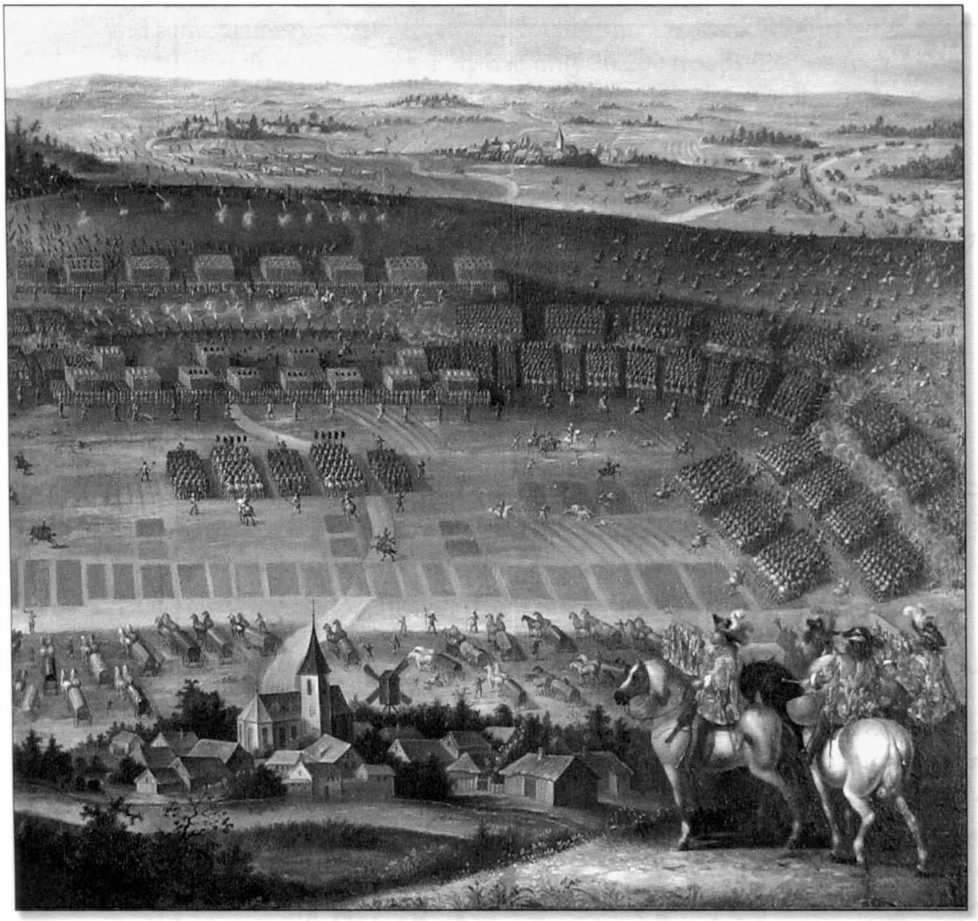

Het Coninkl. Sweetſche Velt-leger by Werben. an.° 1631.
De Elbe Fluv.
Hauel Flu.
A. De Stat Werben. B. De Niewe werkē in 14 dage gemaekt. C. de wal voort leger in 4. dagen gemaekt. D. blinden op de wal daer — Stucken achter ſtonden. E. de poſtē en wachten. F. des Coninx Tent. G. Lantweer met muſquettiers. H. Gener. Tillys Armee. I. Schermutzel.
A
B
C
D
E
F
G
H
I

Tilly's men attack Gustavus Adolphus's camp at Werben, 1631. The King's tent is located in the round enclosure in the centre. Note the two pontoon bridges across the river, which, together with the town walls, protects the camp's flank. (***TheatrumEuropaeum***; photo: Medströms)



Battle of Breitenfeld, 1631. (Johan Hammer; photo: Medströms)

Mecklenburg, Åke Tott, Adolf Frederick, Duke of Mecklenburg, and John Albert, Duke of Mecklenburg-Güstrow (1590–1636), led 5,000 Swedes and 3,000 Mecklenburgers. Their task was to safeguard the north-west and to gain control over Rostock. Tott was an aggressive brawler and street-fighter (for which he had acquired a reputation already as a student at Uppsala University) whom the Swedes nicknamed the 'snow-plough', since he was ideally suited to push all opponents ahead of him. The Germans interpreted his name differently, since its pronunciation could be taken to mean 'death' in German. Soon it was said, whoever could oppose the Swedish king, when in his ranks marched both Death (Tott) and Devil (Teuffel)? Finally, the experienced Jacob Duwall (*c.* 1589–1634), who had been in Swedish service since 1607, and the young, recently arrived James Hamilton (1606–1649) safeguarded the east with 6,400 men, chiefly enlisted in Britain. In addition, there were smaller forces on the River Elbe, in Pomerania, and in garrisons throughout the north. There was also a 7,000-strong, essentially autonomous expeditionary force in Hesse commanded by William, Duke of Saxe-Weimar (1598–1662). To this was now added John George of Saxony and the 18,300-strong Saxon army. In total, Gustavus Adolphus controlled 68,200



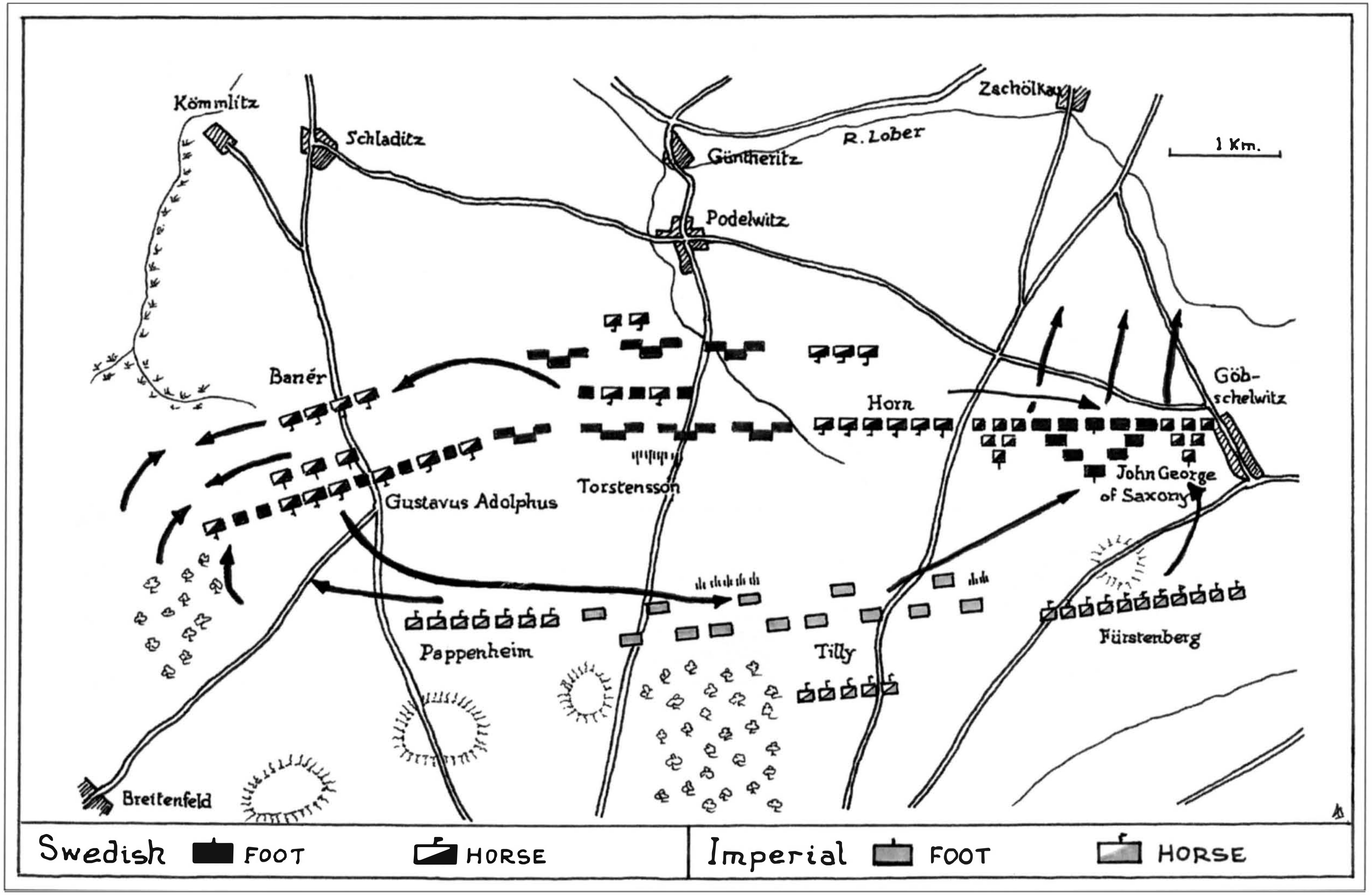
men in the field and 13,500 in garrisons.[118] With a secure base along the coast, with ports, supplies, and fortifications, Gustavus Adolphus finally had the military strength that he needed.

But what counted at present was Gustavus Adolphus's own field army and the allied Saxons. On 17 September 1631, Gustavus Adolphus and Tilly confronted each other at Breitenfeld. At the outset, it seemed that Gustavus Adolphus and John George enjoyed a clear advantage. Gustavus Adolphus's army consisted of 22,800 troops (14,750 foot, 8,050 horse, and a strong artillery including 12 heavy cannons and 42 regimental cannons).[119] John George's Saxon army consisted of 17,300 troops (12,100 foot, 5,200 horse,

---

[118] *Ibid.*, pp.453–63.

[119] *Ibid.*, pp.483–4. As always, there are some discrepancies in the interpretation of available sources. Hedberg, *Kungl. Artilleriet*, p.227 suggests 14,000 foot and 7,600 horse which for the cavalry hinges on the question of whether Schaffmann's Cavalry Regiment participated in the battle. Total strength was days before the battle listed as 16,300 foot and 7,600 horse, which can be explained by attrition. *Sveriges krig* 4, pp.447, 453–4, 461. *Kungl. Svea livgardes historia* 3:1, p.666 follows the General Staff's assessment but suggests 16,300 foot and 7,600 horse.


Kömmlitz
Schladitz
Zachölkau
R. Lober
Güntheritz
Podelwitz
1 Km.
Banér
Horn
Göb-
schelwitz
Gustavus Adolphus
Torstensson
John George
of Saxony
Pappenheim
Tilly
Fürstenberg
Breitenfeld
Swedish
FOOT
HORSE
Imperial
FOOT
HORSE

Map 6. Breitenfeld (1)

and some artillery).[120] Together, the Swedes and Saxons accordingly brought 40,100 men. In comparison, Tilly had only 30,200 troops (20,700 foot, 9,500 horse, and an artillery train consisting of 26 cannons, most of them heavy).[121]

Tilly had already deployed his army when Gustavus Adolphus's men arrived, and he had chosen a good location, which offered his artillery greater range. He had the sun behind him, and the winds blew the dust and – when battle began – smoke into the face of the Swedes and Saxons. Tilly commanded the centre of the Imperial army, which contained most of his infantry. Egon von Fürstenberg-Heiligenberg (1588–1635) led the right wing, and Gottfried Heinrich zu Pappenheim (1594–1632) the left wing. Most cavalry deployed on the wings. Otto Friedrich von Schönberg commanded the artillery, which deployed in front of the battle line.[122] Tilly deployed his infantry in the Spanish style, in what was sometimes called a Spanish square (Spanish: *cuadro*). However, this formation had changed greatly since the previous century. Under Tilly, who likely was one of the architects of the organisational changes, a square consisted of a battalion (Spanish: *escuadrón*) nominally of some 1,000 men, in 10 ranks. The core consisted of pikemen, flanked on both right and left by musketeers. Tilly's entire army stood in a single echelon, with hardly any troops held in reserve, which probably can be explained by the difference in manpower available to the opposing armies.

The Swedish army deployed in a seemingly traditional manner, with mostly cavalry on the wings and infantry in the centre. However, the infantry units deployed in the brigade formation devised by Gustavus Adolphus, which made the Swedish lines more manoeuvrable and gave them more firepower. Even so, there were fewer pikemen than the new formations required.[123] Gustavus Adolphus had attached units of musketeers to the cavalry. He also made sure that he had units in reserve. Johan Banér led the Swedish right wing, Gustav Horn the left wing, and probably Maximilian Teuffel commanded the centre. Gustavus Adolphus began the battle on the right wing. The heavy artillery under Lennart Torstensson was positioned in the centre, ahead of the Swedish infantry.

The Swedish army deployed to the right of the Saxon army, which also consisted of an infantry centre and two cavalry wings. John George personally commanded the centre, Hans Georg von Arnim (who had left Imperial service and instead gone into Saxon service) the right wing, and Hans Rudolf von Bindauf the left wing.

Around noon, Tilly opened fire against his opponents. However, the Swedish artillery showed its mobility and adjusted its position to better hit the enemy. Pappenheim's experienced cavalry charged first, but failed to make

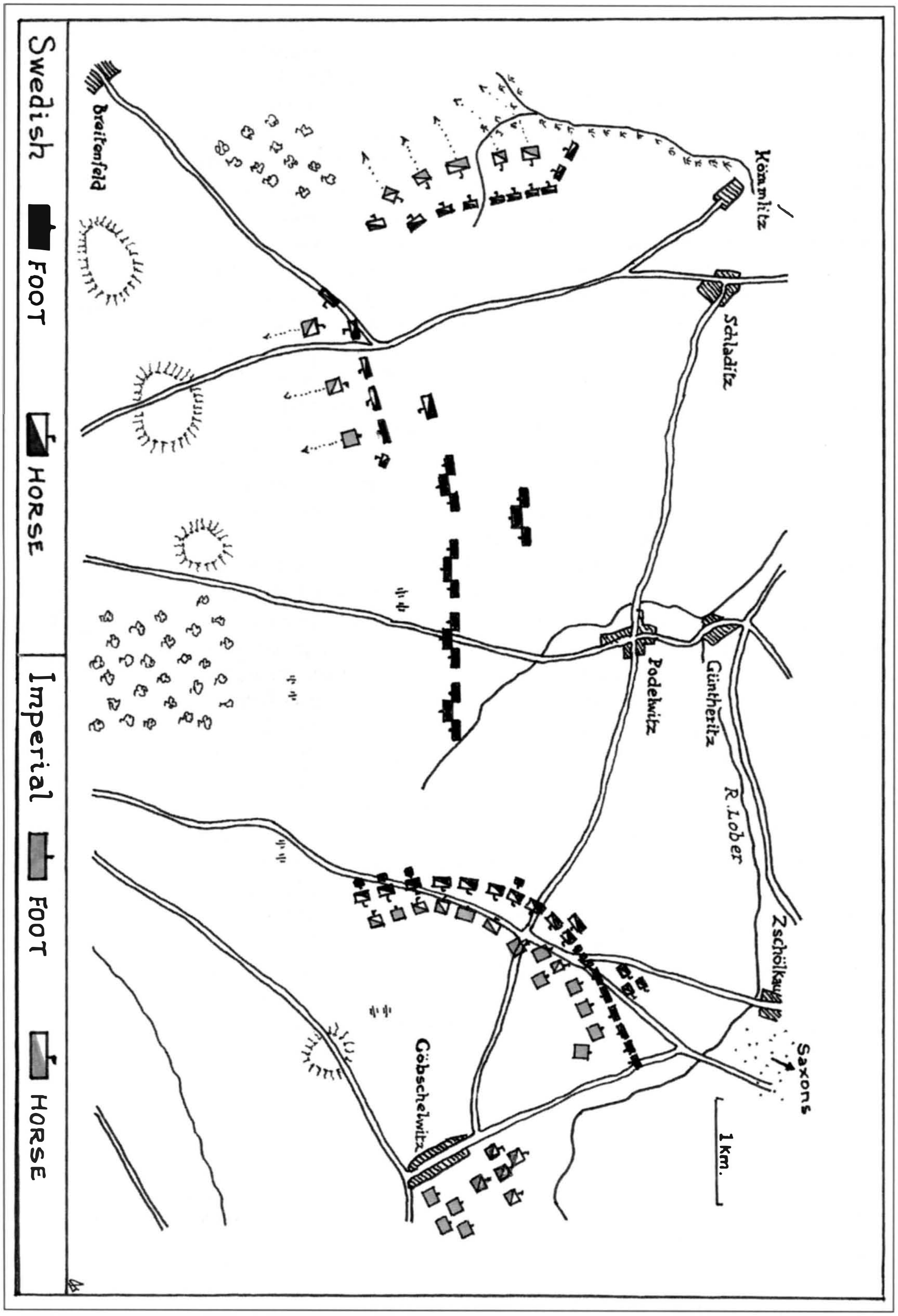
---

[120] *Sveriges krig* 4, pp.485–6. Hedberg, *Kungl. Artilleriet*, p.228 suggests 11,000–12,000 foot and 5,000 horse. Days before the battle total strength was listed as 12,900 foot and 5,400 horse, which again can be explained by attrition. *Sveriges krig* 4, p.456. See also *Ibid.*, 4, p.441. *Kungl. Svea livgardes historia* 3:1, p.666 follows the General Staff's assessment.

[121] Hedberg, *Kungl. Artilleriet*, p.228. *Kungl. Svea livgardes historia* 3:1, p.665 instead suggests 32,000 troops (21,000 foot and 11,000 horse). *Sveriges krig* 4, pp.441, 464–5 offers a yet higher total: 35,000 troops (23,000 foot, 12,000 horse).

[122] Hedberg, *Kungl. Artilleriet*, p.228. For a recent study of the battle, see Gunnar Åselius, 'Breitenfeld 1631', Lars Ericson et al., *Svenska slagfält*, pp.119–29.

[123] *Sveriges krig* 4, p.488; *Kungl. Svea livgardes historia* 3:1, p.667.


Swedish
FOOT
HORSE
Imperial
FOOT
HORSE
Breitenfeld
Kömmlitz
Schladitz
Podelwitz
Güntheritz
R. Lober
Zschölkau
Saxons
Göbschelwitz
1 km.

Map 7. Breitenfeld (2)

headway against the Swedes. With musketeers placed between the cavalry, the combined firepower of the Swedish units caused serious losses among Pappenheim's men, who carried out no less than seven charges, but all in vain. The Imperial cavalry then tried to envelop Banér's wing, but to no avail. Even when they penetrated the Swedish line, they were still met by units of the Swedish reserve, which then advanced to meet the disorganised cavalry.

However, although Pappenheim's charge was halted, Tilly's right wing advanced against and thoroughly defeated the Saxons, who fled the battlefield. Tilly, knowing that the recently raised Saxons were inexperienced, probably from the outset planned first to defeat them, then to carry out an infantry flank attack against the Swedes. This would surely break the Swedish lines. With almost all Saxons driven from the field (Arnim himself and two cavalry units, Arnim's Life Guard and the Elector's Life Regiment, led by Dietrich von Taube, held out), Tilly suddenly enjoyed a considerable numerical advantage, similar to the one previously held by Gustavus Adolphus and John George. However, the tactically more flexible Swedish formations rapidly coped with the new situation by bringing up reserves, thus creating a new flank – as if the Saxons had never been there. Horn then led a counter-charge against Tilly's infantry.

Meanwhile, the Swedish centre followed up the artillery barrage with an infantry charge with pikes. Tilly's position grew increasingly desperate. The Swedish cavalry overran Tilly's artillery, and Tilly's army began to flee from the field. It was only a few infantry units that remained fighting which saved the army from total collapse. Nonetheless, it was a decisive Swedish victory. In Tilly's army, the different combat arms had not achieved tactical cooperation, so they were overcome individually by the combined arms of the Swedes, first the cavalry and then the infantry. Despite having succeeded in enveloping both Swedish flanks, Tilly's attacks had been uncoordinated. The envelopment of the right flank was already repulsed before the same could be done to the left flank, and the latter was repulsed when the Swedes brought up reserves.

Swedish losses were about 3,550 men (2,100 foot and 1,450 horse) including Teuffel. Saxon combat losses were 2,000, including Hans Rudolf von Bindauf. Tilly, who himself was wounded, lost an estimated 20,000 men or more, of whom 7,600 were dead, including Otto Friedrich von Schönberg, while 6,000 remained as captives. He also lost all his artillery. Another 3,000 of his men fled to Leipzig, where they surrendered a few days later. During their flight, thousands of soldiers were ambushed and killed by local peasants, who wanted to take revenge for the ravages previously carried out by Tilly's troops. Tilly's captured infantry immediately went over to Swedish service.[124]

The Saxon flight soiled their reputation, and that of their commander, John George, who because of his frequent drunkenness became known as *Bierjörg* in German and *Öl-Göran* in Swedish (both perhaps best translated as 'Beer-Georgie'), hardly a flattering nickname which remained in oral tradition for a long time.

---

[124] *Sveriges krig* 4, pp.522–3; *Kungl. Svea livgardes historia* 3:1, 672.

The Battle of Rain-am-Lech

Following the victory at Breitenfeld, Gustavus Adolphus and John George of Saxony agreed that Gustavus Adolphus would lead the main force to the west in pursuit of Tilly and in search of winter quarters, while John George and Arnim would bring the Saxon army to the east to safeguard the Oder line against the Imperial troops under Field Marshal Rudolf von Tiefenbach in Silesia.[125]

Gustavus Adolphus and his allies now controlled the exits to the sea of the Rivers Oder, Elbe, and Weser. If Gustavus Adolphus could gain control of the Rhine, he would secure all of northern Germany. Then only the Danube would remain, and if the allies could gain control of this river, too, they could go on the offensive against the Habsburg heartlands. Besides, supply conditions along the Rhine would likely be better.

Gustavus Adolphus accordingly formulated a strategic plan to accomplish what needed to be done. For military and taxation purposes, the Empire was divided into regional groupings of states known as Imperial Circles. Some of them formed natural regions which could be taken advantage of as base territories. While Gustavus Adolphus himself marched on the Rhine with the field army, supported by a smaller field army under Gustav Horn (for logistical reasons the two had to be separated), he would form four new armies. These would be commanded by Johan Banér, Åke Tott, William, Landgrave of Hesse-Kassel, and William, Duke of Saxe-Weimar. The result would be a total of six armies subordinated to himself, some of them named after the Imperial Circles in which they operated. In addition, there was the allied Saxon army. Although numbers fluctuated widely due to the contradictory effects of attrition and ongoing enlistment, by the end of the year the status of the six Swedish armies and the allied Saxon army was roughly as summarised in Table 2 overleaf.

In total, the seven armies consisted of almost 80,000 men, and there were plans to bring up the numbers of the six armies directly subordinated to Gustavus Adolphus to some 160,000. With existing and soon-to-be-enlisted allied units from Brandenburg, Bremen, Mecklenburg, Lüneburg, and Saxony, the Protestant alliance in the near future might be able to field some 200,000 men.[126]

At first, all went according to plan. On 16 October 1631, the Swedish northern army under Tott took Rostock, a port town with 15,000 inhabitants and an Imperial garrison which surrendered in return for free departure. On 18 October, Gustavus Adolphus took Würzburg, and on 27 November, Frankfurt-am-Main. On 17 December, he crossed the Rhine, thus severing the Spanish supply line.[127] On 23 December, Gustavus Adolphus took Mainz. On 22 January 1632, Tott took Wismar and the 13 Imperial warships of what had been Wallenstein's Baltic fleet. Again, the Imperial garrison surrendered in return for free departure. On 2 March, Gustavus Adolphus took Kreuznach.[128]

---

[125] *Sveriges krig* 5, 6, 8, 27; *Kungl. Svea livgardes historia* 3:1, pp.674–5; Hedberg, *Kungl. Artilleriet*, p.236.

[126] *Sveriges krig* 5, 27, 291, 295; Hedberg, *Kungl. Artilleriet*, p.236.

[127] *Sveriges krig* 5, pp.100–103.

[128] *Ibid.*, pp.281–2.

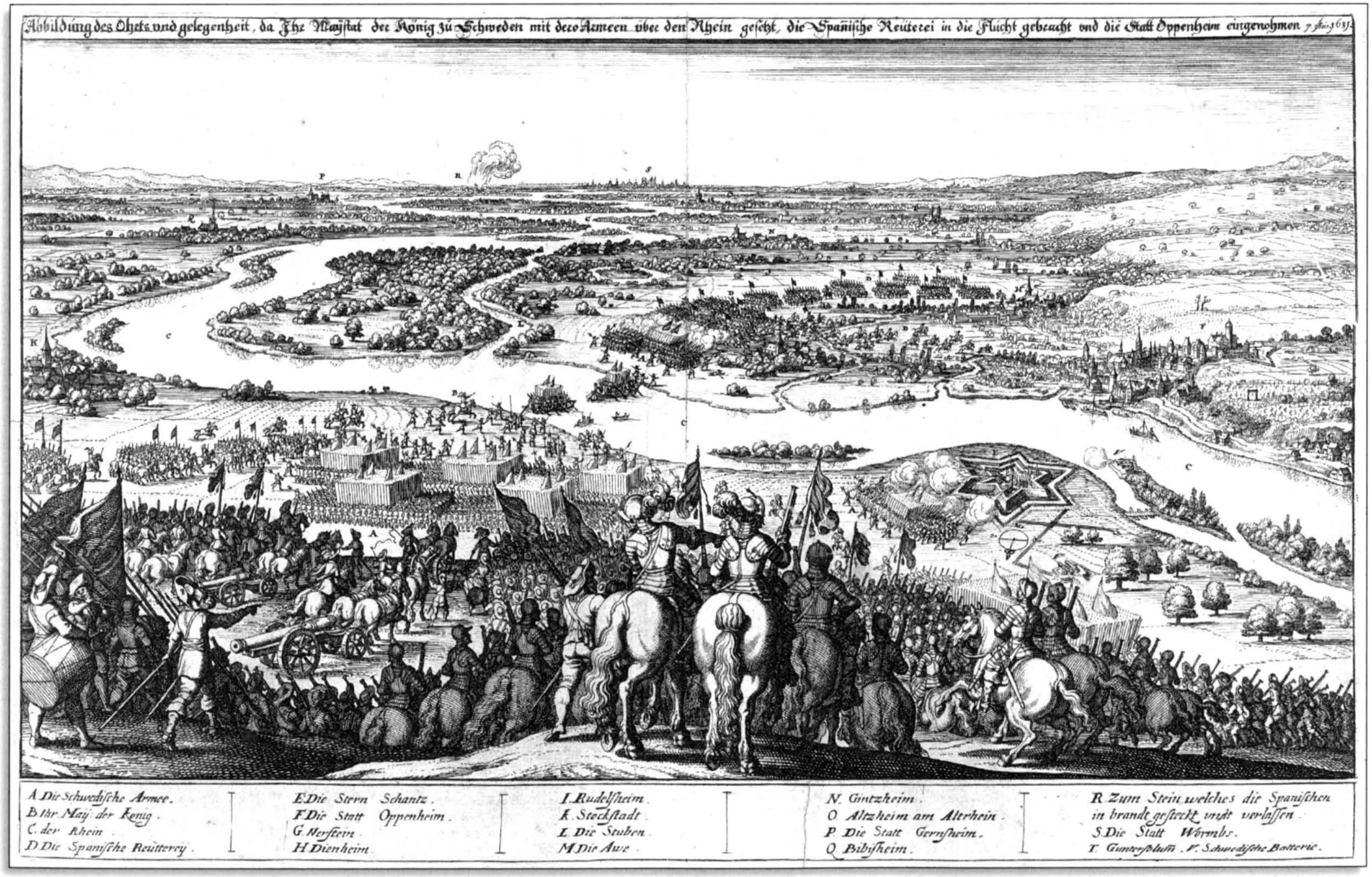


Abbildung des Ohrts vnd gelegenheit, da Ihr Mayſtat der König zu Schweden mit dero Armeen uber den Rhein geſetzt, die Spaniſche Reüterei in die Flucht gebracht vnd die Statt Oppenheim eingenohmen 7. Xbris 1631.
A. Die Schwediſche Armee.
B. Ihr Maij: der Konig.
C. der Rhein.
D. Die Spaniſche Reutterey.
E. Die Stern Schantz.
F. Die Statt Oppenheim.
G. Nerſtein.
H. Dienheim.
I. Rudelſheim.
K. Steckſtadt.
L. Die Stuben.
M. Die Awe.
N. Gintzheim.
O. Altzheim am Alterhein.
P. Die Statt Gernſheim.
Q. Bibiſheim.
R. Zum Stein welches die Spaniſchen in brandt geſteckt undt verlaſſen.
S. Die Statt Wormbs.
T. Gunterſblum. V. Schwediſche Batterie.
A
C
K
P
R
S

Swedish victory at Oppenheim, 1631. (***Theatrum Europaeum***; photo: Medströms)

Table 2. Disposition of the Swedish armies in Germany, late 1631

The Rhine army under Gustavus Adolphus, in the Electoral and Upper Rhenish Circles, based on Mainz, with 16,000 men

The Franconia army under Horn, in the Franconian Circle, based on Würzburg, with 8,500 men

The Magdeburg army under Banér, in the southern half of the Lower Saxon Circle, based on the region around Magdeburg and Kalbe, with 12,000 men

The Lower Saxony army under Tott, in the northern half of the Lower Saxon Circle, based on the region between Wismar and the Baltic shore, Hamburg, and Bremen, with 13,000 men

The Hesse army under William of Hesse-Kassel, based on Kassel, with 8,000 men

The Weimar army under William of Saxe-Weimar, based on Erfurt, with 4,000 men

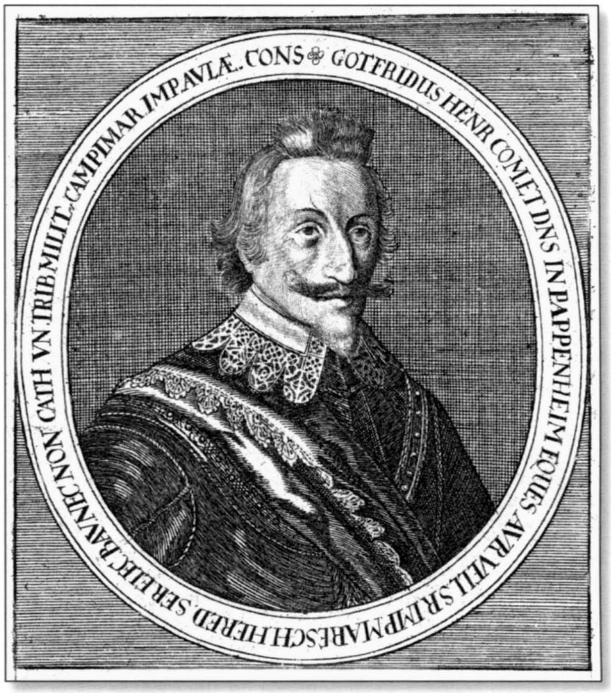
The Saxon army under John George of Saxony and Arnim, in Bohemia and Silesia, with 18,000 men

However, Pappenheim was not yet out of the picture. He commanded an army of some 4,500 men based on Hameln in the Westphalian Circle, in northwestern Germany. Pappenheim's operations around the River Weser soon threatened Tott, Banér, and William of Hesse-Kassel alike.[129] At the same time, Tilly raised a new army in southern Germany. Tilly, and his liege Maximilian, the Elector of Bavaria, suspected that the Swedes would attempt to invade Bavaria by going on an offensive against the Danube line in the south. Tilly accordingly advanced to the north with some 20,000 men, on 9 March defeating Horn's Franconian army of some 8,000 men at Bamberg.[130] Meanwhile, Pappenheim went on the offensive. On 14–15 March, Pappenheim in an audacious move moved between and rapidly defeated, one after the other, the components of a joint force under Lars Kagg (1595–1661), detached from Banér's Magdeburg army, and the Hesse army under Landgrave William of Hesse-Kassel at Albaxen and Stahle. Kagg, whose first wars had been the Kalmar War against Denmark in 1611 and the campaign against Pskov in Muscovy, was by no means an inadequate commander. After his early wars, he had been trained in the Life Guard

---

[129] *Ibid.*, p.295.

[130] *Sveriges krig* 5, pp.475–87; Hedberg, *Kungl. Artilleriet*, p.238.


GOTTFRIDUS HENR COMET DNS IN PAPPENHEIM EQUES AVR VILL S RIMP MARESCH HEREDI SERE BAVAR NEC NON CATH VN TRIB MILIT CAMPIMAR IMP AVLÆ CONS

Gottfried Heinrich zu Pappenheim. (***Theatrum Europaeum***; photo: Medströms)

of Maurice of Nassau for three years, and then gone into the service of Frederick V of Bohemia. In 1621, he was back in Swedish service, fighting at Riga, and he also took part in the battles of Dirschau and Stralsund. No matter, Pappenheim was simply the more able general. Pappenheim continued to harass the Swedes and Hessians for days after the victory, until Pappenheim's small army, despite its inferiority in numbers, had paralysed all opposition activities in the region. Pappenheim, with his characteristic vigour, then turned on Tott, who was keeping Stade under blockade. On 26–28 April, Pappenheim defeated several of Tott's regiments, and on 29 April, his small force harassed Tott's army at Horneburg.[131] Pappenheim, still inferior in numbers, then withdrew to Stade, where his emissaries already were negotiating with representatives of Christian IV of Denmark about a joint offensive against the Swedes. Although Christian wavered and abandoned the talks, it was obvious that Tott was not up to dealing with Pappenheim's aggressive strategy. As a result, Gustavus Adolphus replaced Tott as commander of the army in the Lower Saxon Circle with his other cavalry commander, Wolf Heinrich von Baudissin.[132]

Tilly had expected that Gustavus Adolphus would move against the Danube line, and he was right. While Pappenheim harassed Tott in the north, Gustavus Adolphus took advantage of Tilly's absence by leaving his winter quarters in the Rhineland. He then led the Swedish field army to the Danube, where Gustavus Adolphus, who by then had joined forces with Horn, in early April took Donauwörth, a town on the northern side of the river. Soon after, the armies of Banér and William of Saxe-Weimar arrived, too. Gustavus Adolphus now had at his disposal a force of 37,000 men (22,500 foot, 15,000 horse, and a strong artillery of 72 cannons under Torstensson).[133] He was finally ready to move into Bavaria itself.

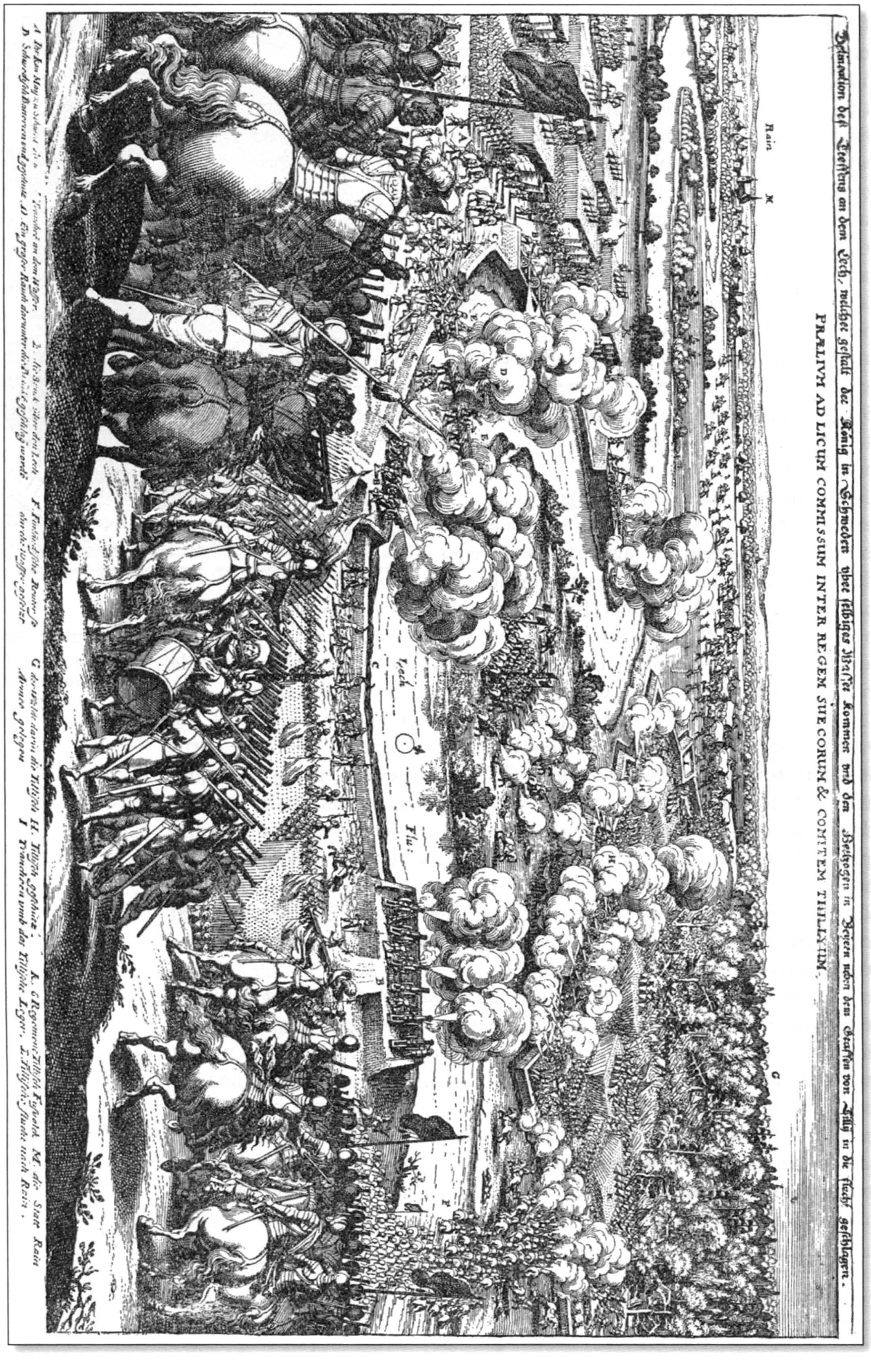
In response, Tilly moved to prevent the Swedes from crossing the River Lech. The Swedish army reached Rain-am-Lech, where Tilly had built redoubts to prevent a Swedish crossing. The Lech was only 30 to 40 metres wide, but water flow was rapid, riverbanks high, forested, and muddy, and the river difficult to cross. It is hard to reconcile the sources from the action, but it seems that Gustavus Adolphus identified an islet or peninsula on the opposite side of the river some distance to the south of Tilly's position that would enable a crossing. Since Tilly had destroyed the boats on the Lech, Gustavus

---

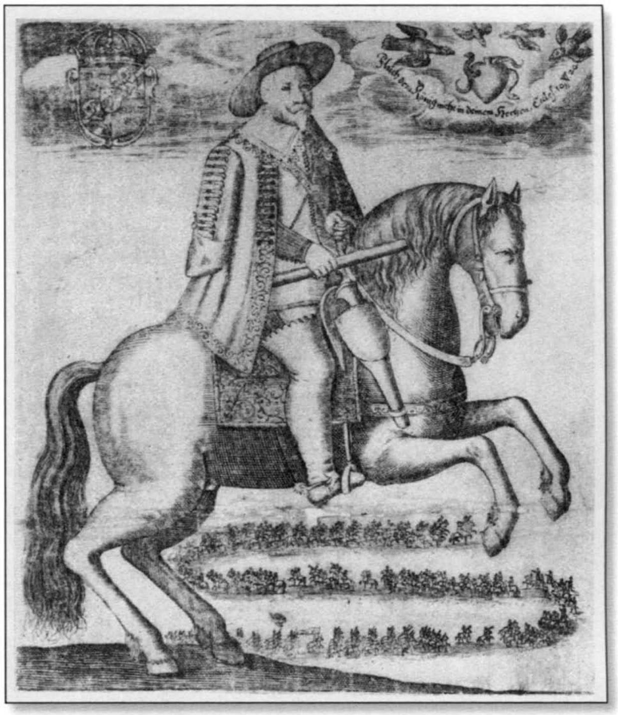
[131] *Sveriges krig* 6, pp.84–7, 105–6.

[132] Later, in 1633 and then dissatisfied with his situation, Baudissin left Swedish service. In 1635, he instead joined the Saxon army.

[133] *Sveriges krig* 5, p.509; Hedberg, *Kungl. Artilleriet*, p.239.


Delineation deß Treffens an dem Lech, welcher geſtalt der König in Schweden uber ſelbiges Waſſer kommen und den Hertzogen in Beyern neben dem Graffen von Tilly in die flucht geſchlagen.
PRÆLIUM AD LICUM COMMISSUM INTER REGEM SUECORUM & COMITEM TILLYUM.
Rain
Lech
Flu:

Rain-am-Lech, 1631. (*Theatrum Europaeum*)



Gustavus Adolphus at the entry into Nuremberg, March 1632.

Adolphus had boats transported overland from the Danube. On 13 April, Gustavus Adolphus deployed his army opposite Tilly's position. On the following day, the Swedish artillery opened fire, with Gustavus Adolphus personally aiming cannons on occasion. However, the artillery fire was a feint. On 15 April, some 300 Finnish infantry under Major Jürgen Wrangel (d. 1632) crossed the river to the islet. They then built a bridge, which enabled more troops to cross. As Tilly redeployed his troops to face Wrangel's men, the latter, supported by artillery fire, attempted to cross the final stretch of the river under the cover of smoke from burning wet straw. They established a bridgehead, but it was difficult to bring across more troops. Gustavus Adolphus accordingly ordered his cavalry to ford the river on both sides of the bridgehead, so as to enable attacks against Tilly's flanks. The northern unit successfully crossed, but then it faced Tilly's army. However, the southern unit was more successful, and moved into a position to threaten Tilly's flank. In the ensuing battle, first Field Marshal Johann von Aldringen and then Tilly himself were wounded, Aldringen by a shot to the head and Tilly by artillery fire. The Imperial army then retreated, undefeated. Tilly died from his wounds on 30 April. Taking command of Tilly's troops, Maximilian, the Elector of Bavaria, ordered them to retreat into the fortress at Ingolstadt. Total losses in the battle have been estimated as 2,000 Swedes and at least 3,000 Imperials.[134]

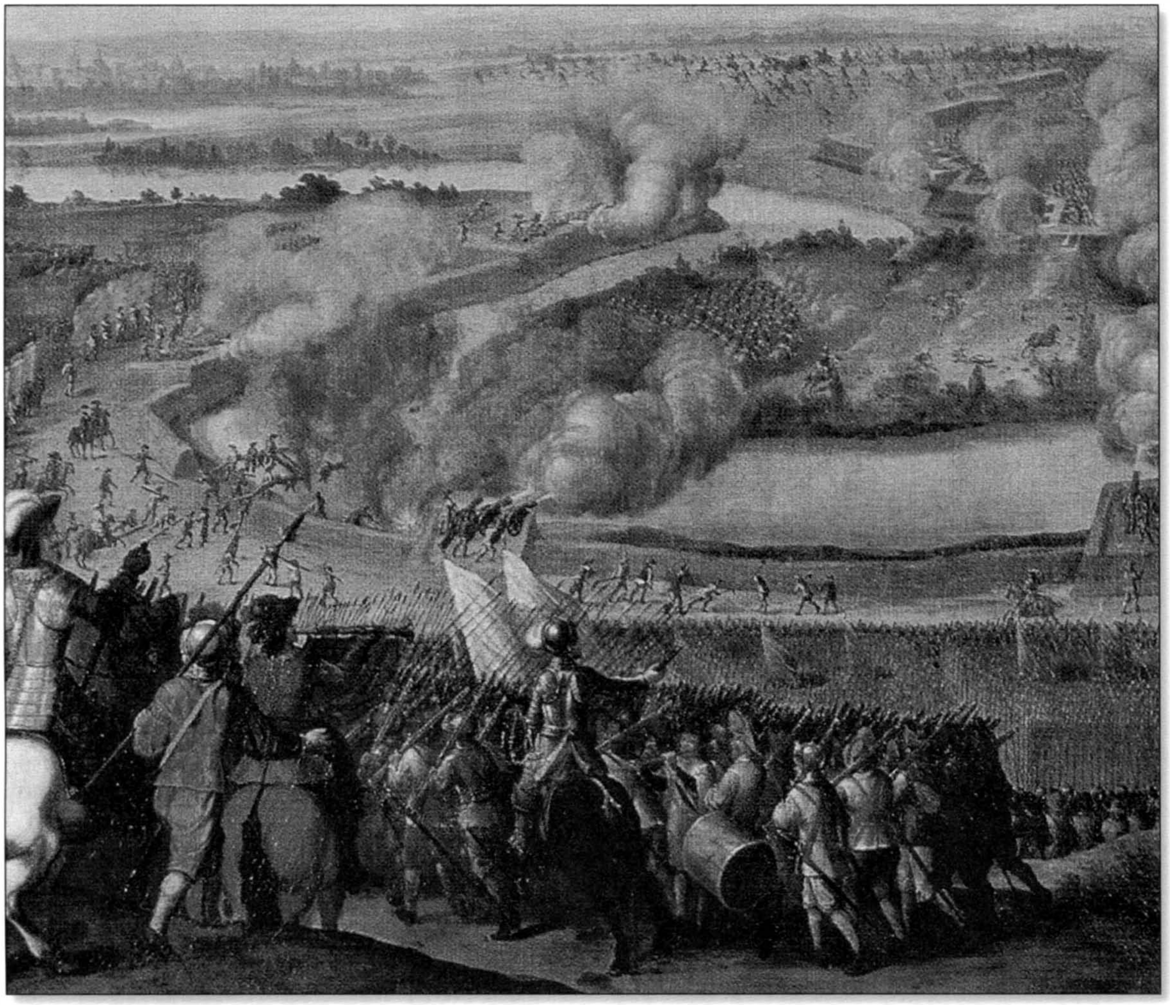
The Siege of Alte Feste

In April 1632, Wallenstein was re-instated in full command of the Imperial army. After the death of Tilly, he also held military command of the Catholic League. In May, Wallenstein moved against the Saxons in Bohemia (during the summer, his commanders completed the process by driving the Saxons out of both Bohemia and Silesia). In July, Gustavus Adolphus laid siege to Nuremberg with 10,000 foot, 8,500 horse, and a strong artillery of 64 cannons.[135] Wallenstein closed in with some 31,000 foot, 13,100 horse, and 80 cannons, which he moved into a fortified position outside Nuremberg

---

[134] *Sveriges krig* 5, pp.510–19; *Kungl. Svea livgardes historia* 3:1, 690–4; Hedberg, *Kungl. Artilleriet*, pp.239–40.

[135] *Sveriges krig* 6, pp.138–9; *Kungl. Svea livgardes historia* 3:1, 703; Hedberg, *Kungl. Artilleriet*, p.240.



Rain-am-Lech, 1631. (Johan Hammer, Karlberg Castle; photo: Medströms)

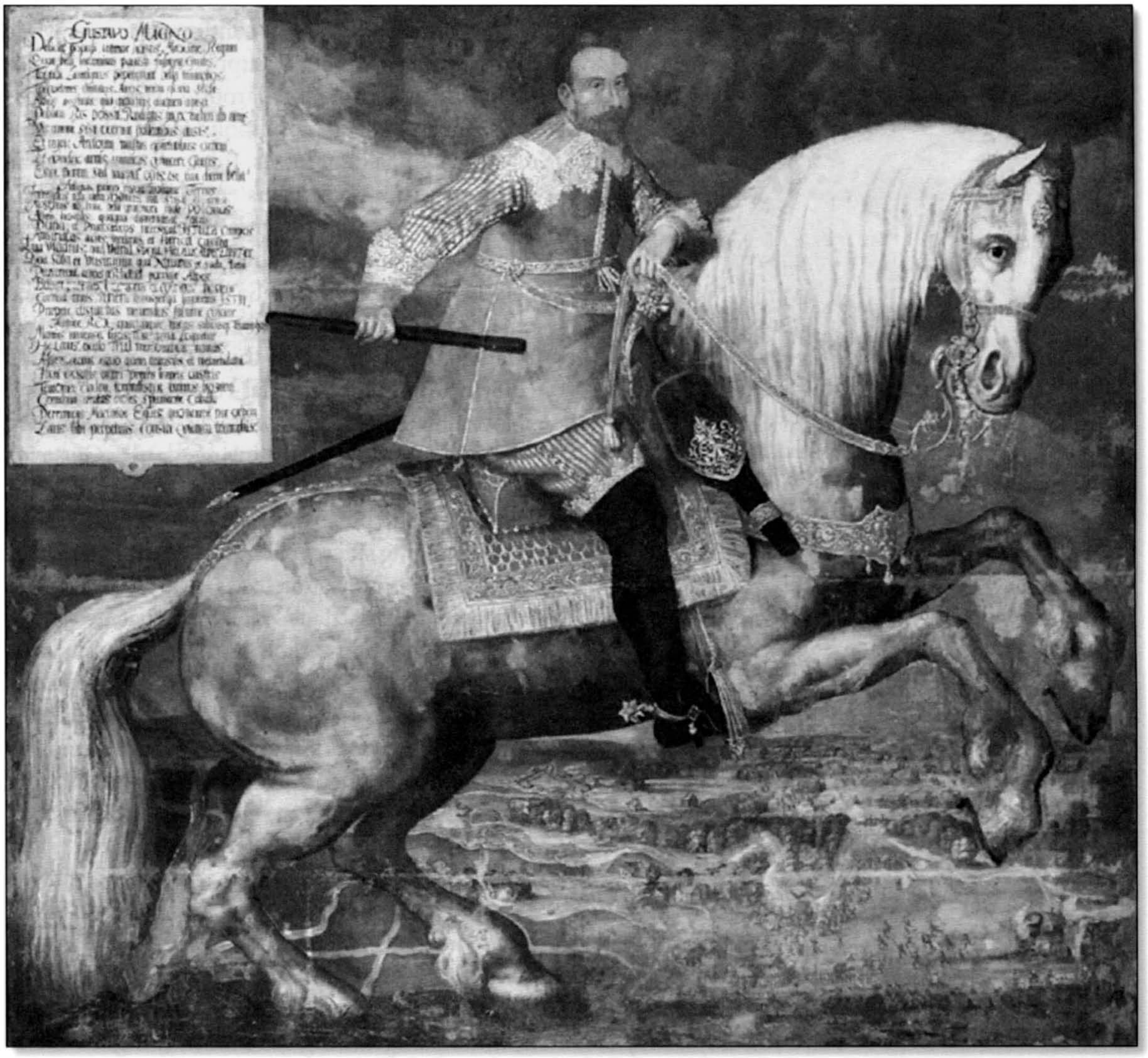
based on a medieval castle, known as the Alte Feste.[136]

In late August, Gustavus Adolphus received reinforcements brought by Axel Oxenstierna, which increased his strength to some 27,600 foot, 17,000 horse, and 170 cannons.[137] This was the largest field army that Gustavus Adolphus, or indeed any Swedish monarch, ever commanded, then or later. Gustavus Adolphus's commanders included Johan Banér, who commanded the infantry; Duke Bernard of Saxe-Weimar (1604–1639; the younger brother of William of Saxe-Weimar who henceforth took over his brother's field army), who commanded the cavalry; and Lennart Torstensson, as artillery commander. William of Saxe-Weimar served as the King's deputy and second-in-command. On the night between 2 and 3 September, Gustavus Adolphus received intelligence that Wallenstein was pulling out. He decided to carry out

---

[136] *Sveriges krig* 6, pp.150–2; *Kungl. Svea livgardes historia* 3:1, 704; Hedberg, *Kungl. Artilleriet*, p.241.

[137] *Sveriges krig* 6, pp.198–201; *Kungl. Svea livgardes historia* 3:1, 708; Hedberg, *Kungl. Artilleriet*, p.241.

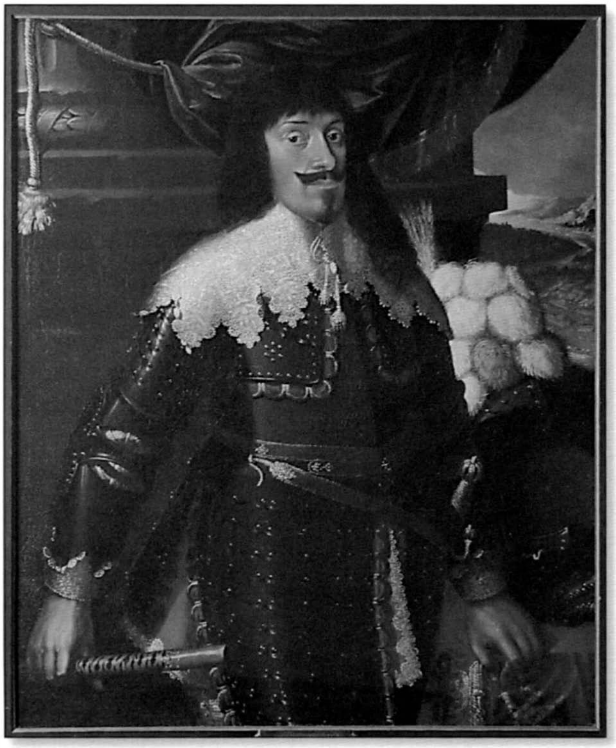


Gustavus Adolphus crossing the Lech. (Cornelius Arendtz)

an immediate assault on the Alte Feste. Forming two assault teams, Gustavus Adolphus took command of one while Bernard led the second. On the following morning, they attempted to storm the enemy strongpoint. However, the intelligence had been wrong; the battle raged for 10 hours, and the Swedes suffered considerable losses. Swedish dead were reported as 1,000, with another 1,400 wounded within the infantry alone. Banér was wounded, having suffered a bad wound due to a shot in the arm. Torstensson was taken prisoner. In comparison, Imperial casualties were insignificant and mostly consisted of wounded.[138] Gustavus Adolphus had gambled on the received intelligence being correct, but this time it had failed him.

---

[138] *Sveriges krig* 6, pp.204–17; *Kungl. Svea livgardes historia* 3:1, 708–11; Hedberg, *Kungl. Artilleriet*, pp.242–3.



Bernard of Saxe-Weimar. (Photo: Medströms)

Although the siege continued for a while, both armies were out of supplies because the two had devastated the area around Nuremberg. As usual when supply conditions failed, the armies suffered appalling losses from disease, famine, and desertion. Gustavus Adolphus eventually again moved south towards Bavaria. Wallenstein, however, a week later moved north-east, into the lands of the Elector of Saxony. Having pushed the Saxons out of Bohemia and Silesia, he now wanted to end the Saxon threat by compelling the Elector to accept Imperial rule. Leipzig fell on 1 November, and the town's castle, Pleissenburg, surrendered on the following day.[139] Gustavus Adolphus realised that Wallenstein through this action might push the fickle Elector of Saxony into changing sides, which would cut the Swedish army's communication lines to Pomerania and the Swedish heartland. Knowing that he had to take action against such an outcome, Gustavus Adolphus marched from the south to save the Elector's lands and drive Wallenstein out of Saxony. This was another gamble, but a necessary one. Wallenstein had identified the weakest link in Gustavus Adolphus's strategy, and he intended to make full use of it. As a strategist, Gustavus Adolphus had met his match in Wallenstein.

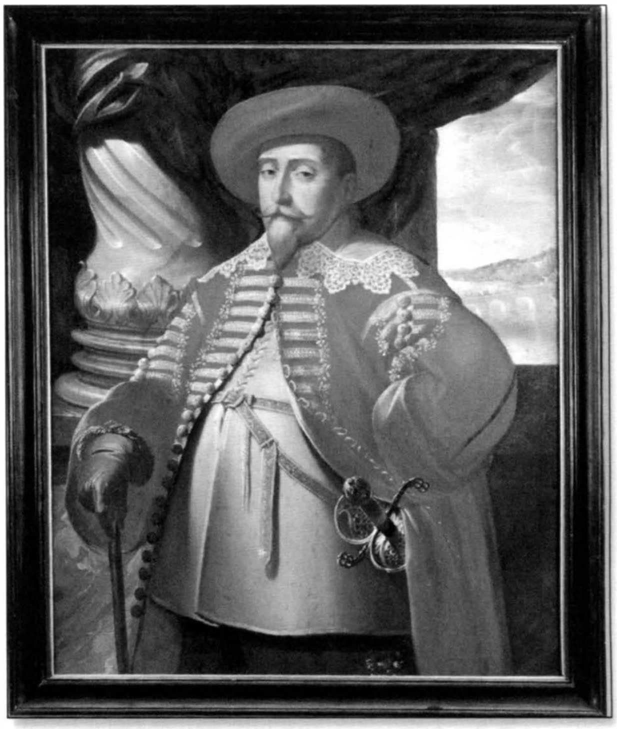
The Battle of Lützen

The two armies encountered each other near Weissenfels, outside Leipzig. For a few days, they faced off, none being willing to risk attacking the other. Wallenstein enjoyed superiority in numbers; Gustavus Adolphus expected reinforcements in the form of a combined Lüneburg-Saxon army of possibly 6,000 men under George (1582–1641), Duke of Brunswick-Lüneburg. George had gone into Swedish service, but his army remained on the far side of the Elbe, near Torgau, on the other side of Wallenstein's army. However, the Swedish position at Naumburg on the River Saale was well-fortified. Moreover, Wallenstein's position could not be supplied by river, since the Saale was blocked by the Swedish camp to the south and a Swedish-led garrison at Halle to the north.

In addition, Wallenstein received unwelcome news from other parts of Germany. In the south-west, Horn had on 7 November taken the fortress of Benfeld in Alsace, south of Strasbourg, which closed the Rhine to the Spaniards and ensured that there would be no Habsburg reinforcements from

---

[139] *Sveriges krig* 6, p.359.



Gustavus Adolphus in his Polish dress: a red caftan decorated with white braid, velvet cuffs, and lace collar over his buff coat, and a red hat, 1632. Painted two weeks before his death, possibly by Matthaeus Merian the Elder. Gustavus Adolphus wore this dress when he entered Frankfurt-am-Main in 1631. The view of the New Bridge in the upper right corner of the canvas was familiar to Merian, since it was seen from his studio in the town. Some interpret the use of Polish dress by Gustavus Adolphus at the time as propaganda for his bid to be elected King of Poland instead of Sigismund. On the other hand, he was known to use aspects of Polish dress and weaponry while campaigning in the Commonwealth. (Photo: Medströms)

Brussels or Madrid. In the west, Pappenheim's absence had emboldened the Protestants, who now threatened Cologne (on the important Habsburg route to the Spanish Netherlands, more on which below). Moreover, the weather had already grown cold and supply conditions were deteriorating. On 14 November Wallenstein ordered his army to break up and move into separate quarters. If he had not, there was a risk that his largely enlisted army might desert. Yet he arranged that most units would remain within range, subject to recall if needed. This also meant that they would continue to block the Swedish communication lines to the north, divide the Swedish and Saxon armies, and supply the army from enemy territory. As for Pappenheim, Wallenstein authorised his return to the Rhineland.

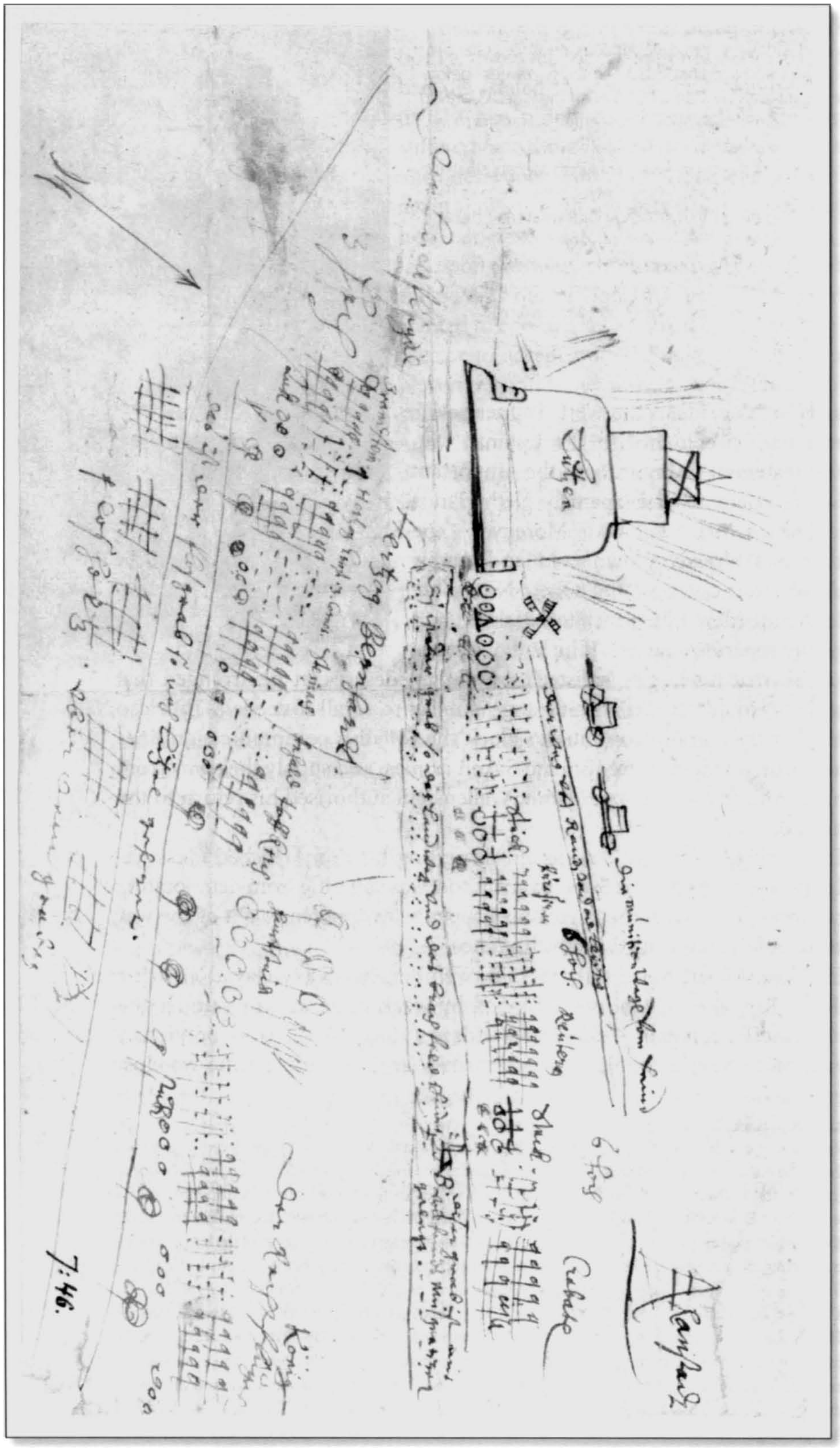
The intelligence about Wallenstein dispersing his army reached Gustavus Adolphus the same day. The Swedish army, too, was suffering from deteriorating supply conditions. With the aggressive Pappenheim apparently out of the way, Gustavus Adolphus decided to attack at once.[140]

The Swedish army set out on 15 November, but was delayed crossing the River Rippach, which was defended by weak Imperial units under the able Count Rudolf von Colloredo-Waldsee (1585–1657), who previously had distinguished himself in the Mantuan War.[141] Yet more time was lost

---

[140] *Sveriges krig* 6, p.389. *Sveriges krig* presents the most thorough description of the Swedish army in the battle but should be read with *Kungl. Svea livgardes historia* 3:1, pp.716–37. Later Swedish works generally follow their conclusions. For a comprehensive treatise that far better covers Imperial records, see Richard Brzezinski, *Lützen 1632: Climax of the Thirty Years War* (Oxford: Osprey Campaign 68, 2001), which presents orders of battle for both sides and offers an excellent survey of the battle. For an archaeological survey of the battlefield and additional conclusions on the battle, see André Schürger, *The Archaeology of the Battle of Lützen: An Examination of 17th Century Military Material Culture* (Glasgow: University of Glasgow, dissertation, 2015). Schürger's discussion of the historical sources (*Ibid.*, pp.30–55) is particularly important. While the Swedish works display a considerable bias in favour of Gustavus Adolphus, Brzezinski and Schürger possibly accept too easily the assertions of Imperial relations, in particular when it comes to the number of captured standards and disrupted enemy units, claims of a type which both sides regularly exaggerated.

[141] *Sveriges krig* 6, pp.399–405.


Lützen
Herzog Bernhard
König
7:46.

Contemporary Swedish sketch of the battle of Lützen. Author unknown, not all units are marked, and it possibly gives the perspective of somebody in the supply train. (Swedish Military Archives, Sveriges krig 3:86) building temporary bridges across an unexpected stream, known as the Flossgraben, south-east of the little town of Lützen. Gustavus Adolphus thus lost the moment of surprise.

When Wallenstein received reports that the Swedish army was marching towards Lützen, he hurriedly recalled all units. Pappenheim, at Halle, received a letter with this order by midnight on the same day, and two hours later he and his cavalry were riding for Lützen, a stiff day's ride which they now had to do at night.[142]

Meanwhile, Wallenstein had his men reinforce their positions north of the road to Leipzig. They took advantage of an existing ditch along the road, which they turned into a trench. This, together with the walled gardens on the outskirts of the town, provided good cover for musketeers.[143] In the same way as at Alte Feste, Wallenstein aimed to fight a defensive battle, behind field fortifications. On 16 November, he burned Lützen. The natural morning mist combined with the thick smoke from the burning town delayed the Swedish army further.

Gustavus Adolphus had a total strength of 12,800 foot, 6,200 horse, and 60 cannons.[144] He commanded the right wing while Bernard of Saxe-Weimar led the left wing, both of which consisted of two lines of cavalry. It is unclear who was in formal command of the centre, which consisted of two lines of infantry brigades; however, it was probably Nils Brahe who also commanded the first line, while the veteran Knyphausen commanded the second. At the rear, there was a single cavalry squadron in reserve. It was slightly ominous that some of the King's most talented and experienced officers were unavailable: Horn was in Alsace, Banér had been wounded in the Alte Feste campaign and had not yet recovered, and Torstensson, captured at Alte Feste, was imprisoned in a damp jail in Ingolstadt (the unsanitary conditions crippled him with gout, despite him not yet having reached the age of 30).[145]

Wallenstein's total strength is difficult to estimate, in particular since recalled units arrived throughout the day. If the units that returned during the day are included, he was weaker in infantry than Gustavus Adolphus but stronger in cavalry. He also had a significant force of light cavalry, the Croat units under the able Johann Ludwig Isolani (1586–1640), which Gustavus Adolphus entirely lacked. However, for most of the day Wallenstein certainly had the weaker army. The estimates likely to be most thorough suggest that in the morning Wallenstein had at his disposal some 8,200 foot, possibly 5,800 horse, and 24 cannons.[146] Pappenheim had an additional 2,700 foot, 2,400 horse, and some cannons.[147] For an order of battle, see Appendix II.

---

[142] *Ibid.*, pp.405–7.

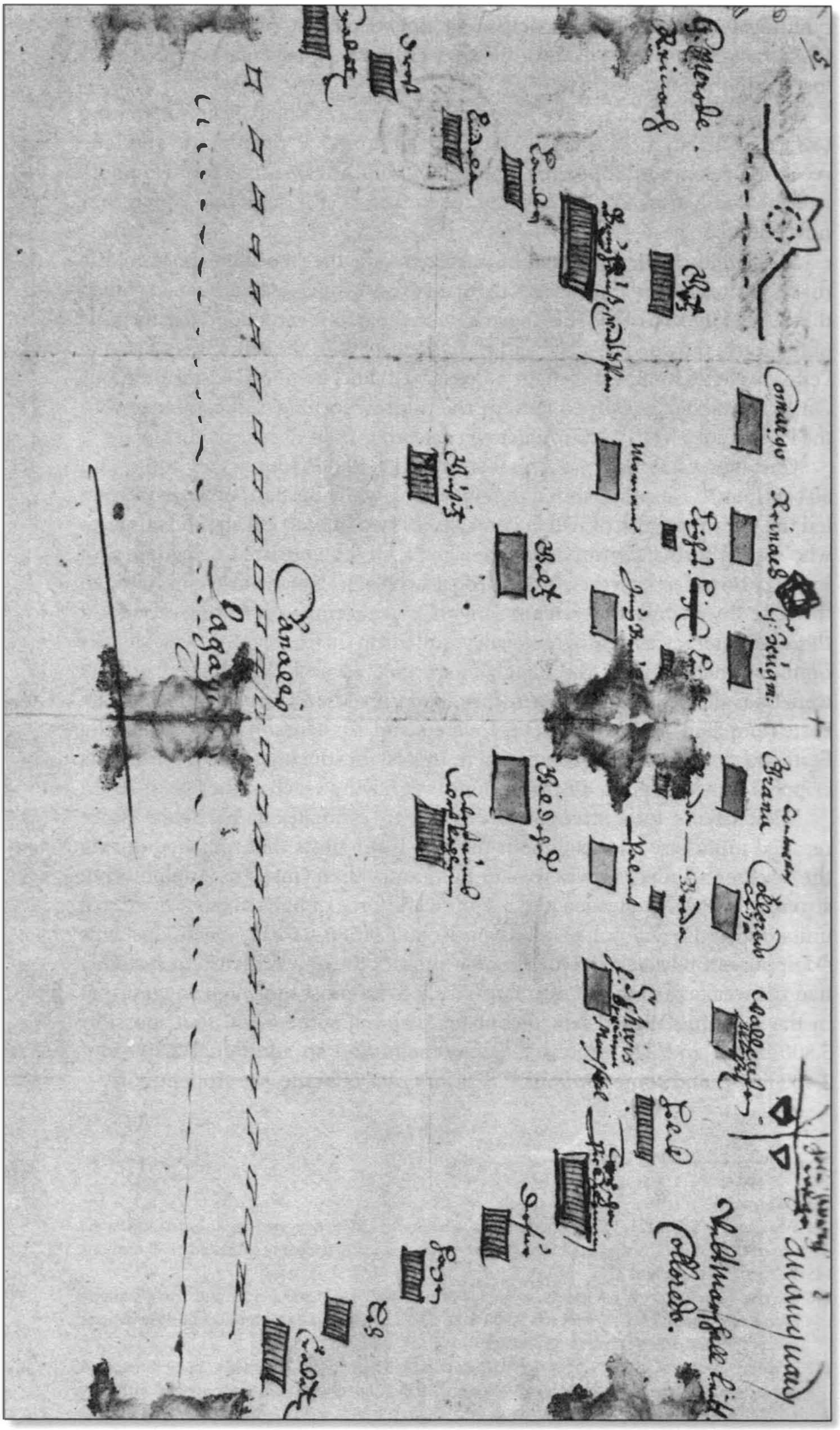
[143] *Ibid.*, p.419.

[144] *Sveriges krig* 6, pp.421–25. Hedberg, *Kungl. Artilleriet*, p.248, suggests 5,800 horse and some uncertainty about the strength of the artillery, although it still probably consisted of 60 cannons.

[145] *Sveriges krig* 6, pp.426–8.

[146] Schürger, *Archaeology*, p.63, argues for 8,200 foot, 4,800 to 5,800 horse, and some artillery. *Sveriges krig* 6, pp.412–14, suggests 9,900 foot, 6,900 horse, and 24 cannons, but these figures, except for the artillery, need to be revised.

[147] Schürger, *Archaeology*, p.291. *Sveriges krig* 6, pp.414–15, suggests 2,700 foot, 2,300 horse, and some cannons. Brzezinski, *Lützen*, p.59, suggests that Pappenheim eventually arrived with only 1,500 to 2,000 horse.



Contemporary Imperial battle plan used for the battle of Lützen, perhaps drawn up by Wallenstein or one of his aides and given to Pappenheim, since it was found on his dead body, stained with his blood. However, it was not devised for Lützen but for an expected battle of Weissenfels on 12 November 1632 which never took place. (Brigitte Holl, 'Wallensteins angebliche Skizze für die Schlacht bei Lützen', Der Dreissigjährige Krieg: Beiträge zu seiner Geschichte (Vienna: Schriften des Heeresgeschichtlichen Museums in Wien 7, 1976), pp.59–78, on pp.71–72)

Yet, the two armies were more equal than it might seem. Wallenstein had learnt from the Swedes and copied the key characteristics of the Swedish model. For the infantry, he had introduced regimental artillery, at least for some regiments, and ordered a formation based on infantry battalions of some 1,000 men, each with a depth of seven ranks (as compared to the Swedish six ranks). The core of the formation consisted of pikemen, flanked on both right and left by musketeers. Wallenstein had adopted the aggressive Swedish tactics for his pikemen. Already on 26 March 1632, he had issued a circular to his colonels ordering them to employ their best and bravest men as pikemen, regardless of the prevailing disdain of the pike in the Imperial army.[148] Wallenstein had also introduced the deployment of cavalry squadrons interspersed with units of musketeers, 150 men strong, between the cavalry units in the Swedish manner. Besides, it is generally assumed, although there is no documentary evidence to this effect, that Wallenstein discouraged the use of the caracole already at the Alte Feste.[149] As a result, both sides were deployed more or less in the same style.

Wallenstein commanded the right flank, which consisted of cavalry and was anchored on Lützen with its fortified walls and bastions. The left wing, also cavalry, was commanded by Henrik Holck, the Danish Protestant who previously had fought against the Imperial armies, including as commander at the 1628 siege of Stralsund. However, with Denmark out of the war he in 1630 went into Imperial service, first under Tilly and then under Wallenstein. Holck had acquired a well-deserved reputation for ruthlessness, believed firmly in the virtue of ravaging enemy territory, and was a skilled administrator and commander who was easily recognisable due to the eye-patch which covered his left eye. He would prove his worth in the ensuing battle. The centre, which consisted of infantry, was led by Rudolf von Colloredo-Waldsee, with the cannons under the head of the Imperial artillery, Hans Philipp von Breuner (d. 1632). Wallenstein deployed his army in three lines, behind a skirmish line in the trench along the road.[150]

Gustavus Adolphus had hoped to attack at dawn, before Wallenstein's reinforcements arrived. However, the waterways, mist, and smoke delayed deployment. Visibility did not improve before 11:00 a.m., at which point Gustavus Adolphus ordered his men to attack. He first seems to have aimed to envelop the enemy's left flank,[151] and as a result, the action began with the Swedish right wing and the two right-most brigades of the centre's first line, the Swedish and the Yellow, moving against Wallenstein's lines. Despite taking casualties from the musketeers in the roadside trench and the Imperial artillery, at first all went well. The infantry, under Brahe, took the well-defended Leipzig road. The cavalry of the Swedish right wing, under Gustavus Adolphus, pushed on steadily, preparing to envelop the Imperial line.

---

[148] Beda Dudik, *Waldsteins Correspondenz 2: Eine Nachlese aus dem K. K. Kriegsarchive in Wien* (Vienna: Karl Gerold, 2 vols., 1865–1866), p.7.

[149] *Sveriges krig* 6, p.216, makes the assumption based on the Imperial cavalry's behaviour while noting the lack of evidence. German cavalry, such as Pappenheim's, already used aggressive tactics and did not invariably rely on the caracole.

[150] *Sveriges krig* 6, p.419; Schürger, *Archaeology*, pp.230–43, p.366.

[151] *Sveriges krig* 6, pp.429–30.

Meanwhile, Bernard led the Swedish left wing and the two remaining brigades of the centre's first line, the Green and the Blue, against the Imperial lines. At first successful, for a while it looked as if the Swedes were winning the battle. Then Bernard's advance turned to a halt as the Swedes took increasingly severe casualties from Imperial artillery fire and flank fire from muskets.

At this point (around 12:00 noon) Pappenheim arrived with his cavalry, in total perhaps some 2,400 horse. He probably met and rallied some of Isolani's Croats, which would have increased his strength further, to over 2,800.[152] Pappenheim immediately charged the Swedish right wing but fell almost at once, mortally wounded from shots probably from a regimental cannon. Even so, the Imperial infantry counterattacked, too. The Swedes were pushed back, and finding their flanks exposed, some units became disordered. The infantry brigades suffered substantial losses, in particular the Yellow and Blue which each took more than 60 percent casualties. The units suffered serious losses also in officers, which caused a loss of cohesion. Brahe fell, seriously wounded, and was carried from the field. Suddenly, it looked as if the expected Swedish victory was turning into an impending defeat.[153]

At this point, Gustavus Adolphus personally intervened to encourage the Swedish units again to push forwards. He had no choice: there were no other senior officers available. Together with his entourage, he led the now leaderless Småland cavalry into battle, where he was soon hit by enemy fire. Because of his old wound from Dirschau he could not wear a cuirass, only a buff coat. Perhaps this did not matter, since the present shot seems to have hit his arm. Yet, the wound was grievous, crushing the bone and almost disabling him. Soon after, he became entangled with enemy cavalry, during which engagement he was killed.[154]

It took some before the King's death became generally known, and his loss probably had no major impact on the rest of the battle. The Swedish centre continued to be pushed back with appalling losses. It remains an open question whether the Swedish infantry units of the first line were destroyed, as most modern researchers claim, or retreated in some kind of order, as traditional research suggests.[155] A study of the actual infantry losses show that in the Blue Brigade, the pikemen suffered a casualty rate of 88.0 percent while the musketeers lost 42.6 percent of their numbers. Likewise, in the Swedish Brigade, the pikemen suffered 84.3 percent casualties while musketeers lost

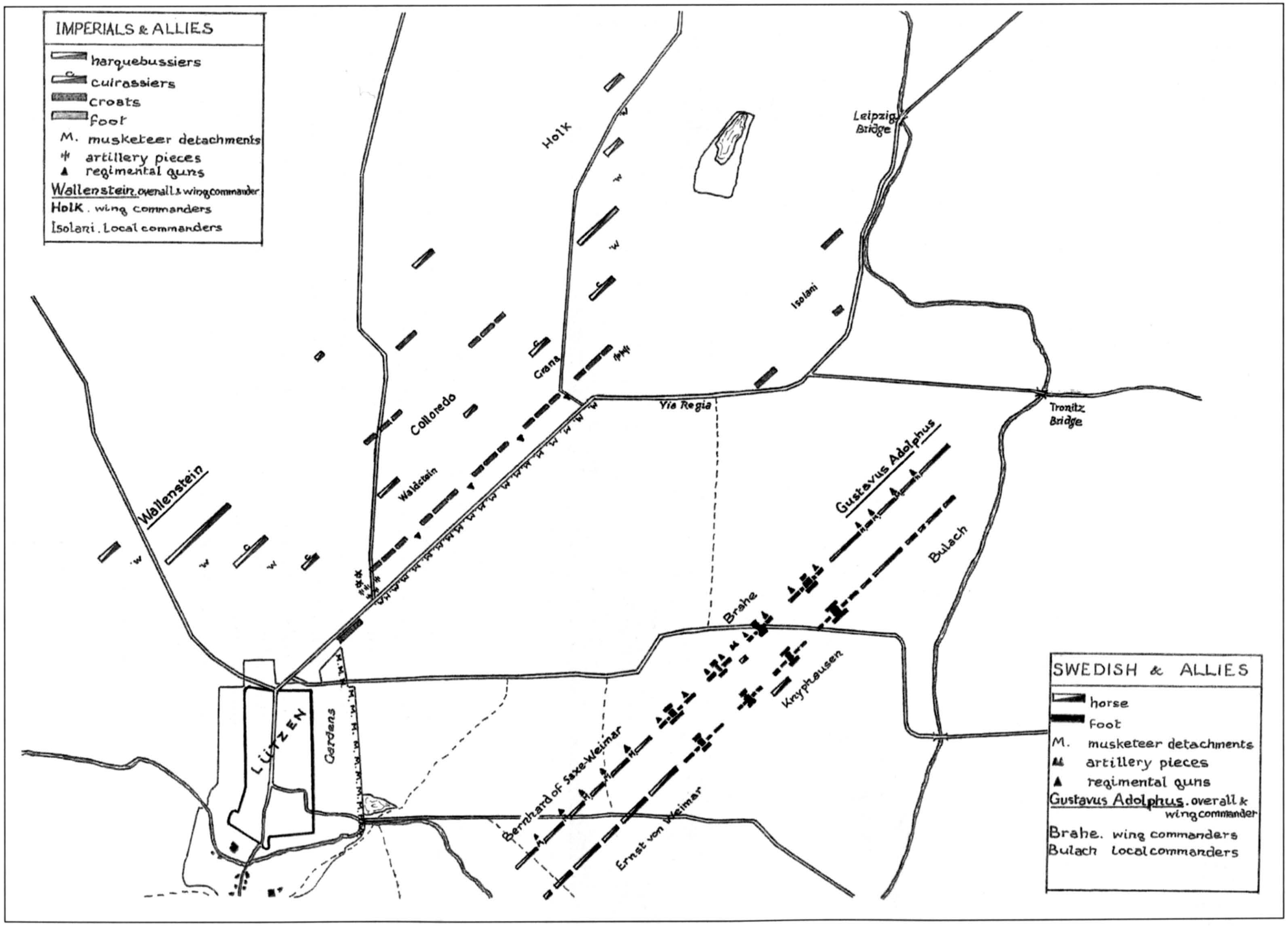
---

[152] Schürger, *Archaeology*, pp.291–2. *Sveriges krig* 6, p.435; Hedberg, *Kungl. Artilleriet*, p.249. As noted, Brzezinski, *Lützen*, p.59, suggests that Pappenheim arrived with only 1,500 to 2,000 horse.

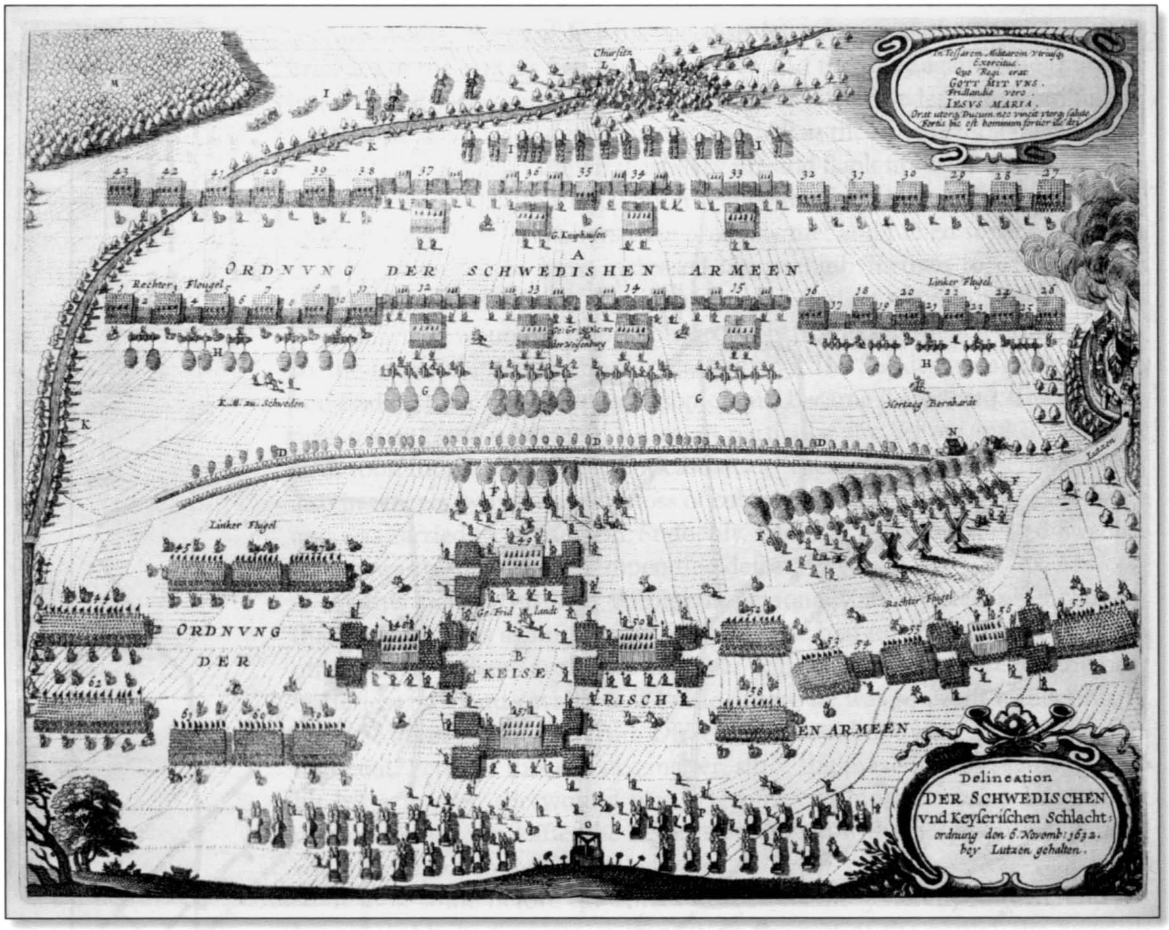
[153] *Sveriges krig* 6, pp.435–7; *Kungl. Svea livgardes historia* 3:1, pp.772–3; Brzezinski, *Lützen*,p.87. *Kungl. Svea livgardes historia* argues that Ottavio Piccolomini's Harquebusier Regiment attacked the Blue Brigade, contrary to *Sveriges krig* which concludes that he attacked the Swedish Brigade. The Blue Brigade was based on the Blue Regiment, while the core of the Swedish Brigade was the Östergötland Regiment. Both regiments wore predominantly dressed in blue, so the Östergötland Regiment was sometimes called the New Blue Regiment.

[154] *Sveriges krig* 6, pp.440–41, 511–16.

[155] *Sveriges krig* 6, pp.437, 447 notes the severe losses of the Swedish, Yellow, and Blue Brigades and describes the result as 'sparse, partly disordered units, exhausted by the hard struggle'. *Kungl. Svea livgardes historia* 3:1, p.732 argues that these brigades, having been pushed back, were reinforced by the addition to their ranks of men from Henderson's Regiment. This may be an overly respectful description of the guard unit which is the study's subject.


IMPERIALS & ALLIES
harquebussiers
cuirassiers
croats
foot
M. musketeer detachments
artillery pieces
regimental guns
Wallenstein. overall & wing commander
Holk. wing commanders
Isolani. Local commanders
Holk
Leipzig Bridge
Isolani
Grana
Colloredo
Waldstein
Wallenstein
Via Regia
Tronitz Bridge
Gustavus Adolphus
Bulach
Brahe
Knyphausen
Bernhard of Saxe-Weimar
Ernst von Weimar
Lützen
Gardens
SWEDISH & ALLIES
horse
foot
M. musketeer detachments
artillery pieces
regimental guns
Gustavus Adolphus. overall & wing commander
Brahe. wing commanders
Bulach Local commanders

Map 8. Lützen (1)


In Teſſaram Militarem Vtriuſq Exercitus.
Quæ Regi erat
GOTT MIT VNS.
Fridlandio vero.
IESVS MARIA.
Orat uterq Ducum nec vincit vterq ſalute
Fortis hic eſt hominum fortior ille dei
ORDNVNG DER SCHWEDISHEN ARMEEN
Rechter Flügel
Linker Flügel
Hertzog Bernhardt
ORDNVNG DER KEISERISCHEN ARMEEN
Linker Flügel
Rechter Flügel
Lützen
Delineation
DER SCHWEDISCHEN
vnd Keyſeriſchen Schlacht:
ordnung den 6. Novemb: 1632.
bey Lutzen gehalten.

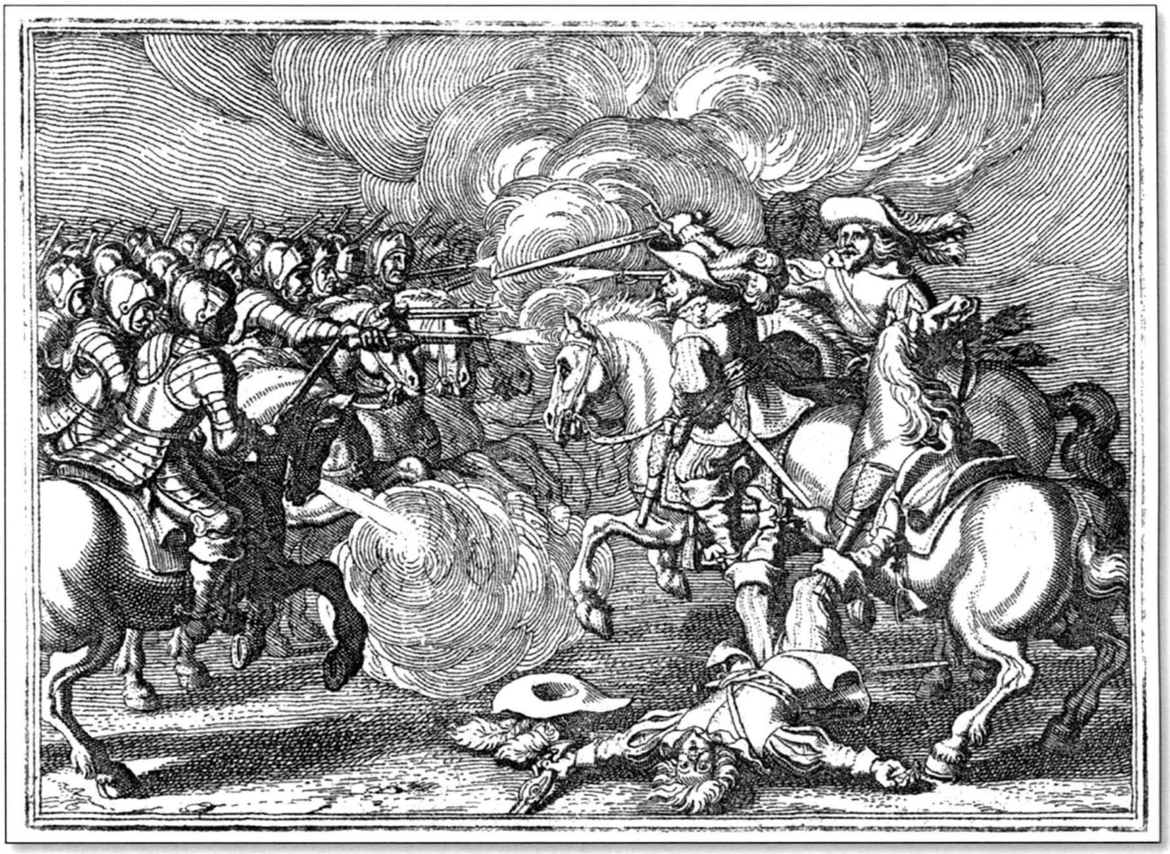
Battle of Lützen, 1632. On the right, the town of Lützen is burning. As was common, the print shows a number of incidents which took place at different times. Besides, the Imperial deployment is incorrect, since Wallenstein did not deploy his infantry in Spanish squares. (Theatrum Europaeum; photo: Medströms)

22.1 percent. In all other units, the casualty rates were similar for the two categories. This suggests that although the brigades certainly were pushed back, it remains possible that the pikemen stayed on, defending the retreat of the musketeers and in the process sacrificing themselves. If so, it was a retreat, not a rout.[156] Such a conclusion is indeed supported by two contemporary post-battle reports. The Imperial Quartermaster-General, Giulio Diodati (d. 1635), who took part in the fighting, noted that 'a strong group of yellowcoats resolutely covered the musketeers with their pikes, so that when attacked by our foot, almost all remained [fallen] on the ground.'[157] The pro-Swedish William Watts, who was not there but had access to eyewitnesses, concluded, with regard to the Yellow and Blue Regiments, 'That their dead

---

[156] Schürger, *Archaeology*, p.356. In this assessment, the claim by the Imperial Quartermaster-General Giulio Diodati of having captured 36 of the standards of the Blue and Yellow regiments but left them on the field because they were so tattered, indeed mere poles, can be disregarded, since the number he claimed was greater than the total number which these units carried into battle. It is, of course, beyond doubt that Wallenstein's men captured numerous Swedish standards at Lützen.

[157] Giulio Diodati, cited in *Sveriges krig* 6, p.437.



Gustavus Adolphus at battle of Lützen. (***Theatrum Europaeum***).

bodies now covered the same ground, Which living they had defended … it was so long since they had beene last beaten; that they had by this time forgotten how to runne away.'[158] Yet, whatever happened, it is certain that these brigades for the rest of the battle were in no condition to fight.

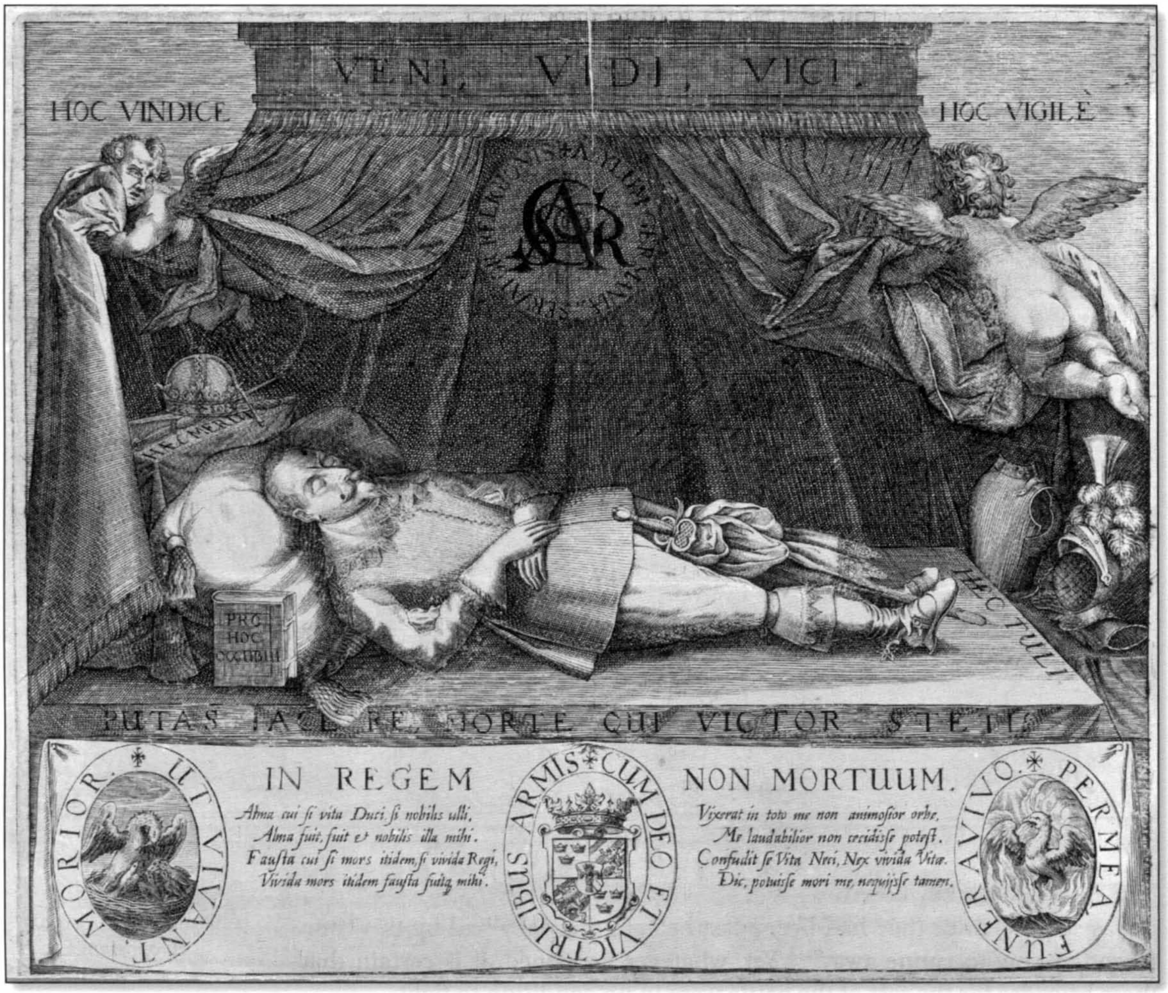
At some point between 1:00 and 2:00 p.m., the entire Swedish line began to founder. Men began to leave their units, seeking to escape from the field. Yet, the experienced Knyphausen managed to hold the Swedish line together, bringing fresh troops from the second line forward to plug the gaps. Others did their part, too, including the King's chaplain, Jacob Fabricius (1593-1654), who in a loud voice began to sing a hymn to rally the fleeing soldiers. Some officers, including an English soldier, George Fleetwood, joined him, and together, they reformed several hundred men in the line.

Bernard's wing had been repulsed, too, and he had heard rumours of the King's death. Both armies having by then drawn apart, exhausted, Bernard sought out Knyphausen. They agreed to continue the battle. Technically, Bernard held the superior rank, but for a while, the two probably simply divided command between them of what, with the plugging of the gaps, had become the new left and right wings.[159]

---

[158] *Swedish Intelligencer* 3, p.145.

[159] Schürger, *Archaeology*, p.334.


VENI, VIDI, VICI.
HOC VINDICE
HOC VIGILE
PRO HOC OCCUBUI
HOC TULI
PUTAS IACERE, MORTE QUI VICTOR STETIT
IN REGEM
Alma cui ſi vita Duci, ſi nobilis ulli,
Alma fuit, fuit et nobilis illa mihi.
Fauſta cui ſi mors itidem, ſi vivida Regi,
Vivida mors itidem fauſta fuitq mihi.
ARMIS * CUM DEO ET VICTRICIBUS
NON MORTUUM.
Vixerat in toto me non animoſior orbe,
Me laudabilior non cecidiſſe poteſt.
Confudit ſe Vita Neci, Nex vivida Vitæ.
Dic, potuiſſe mori me, nequiſſe tamen.
MORIOR * UT VIVANT
PER MEA * FUNERA VIVO.

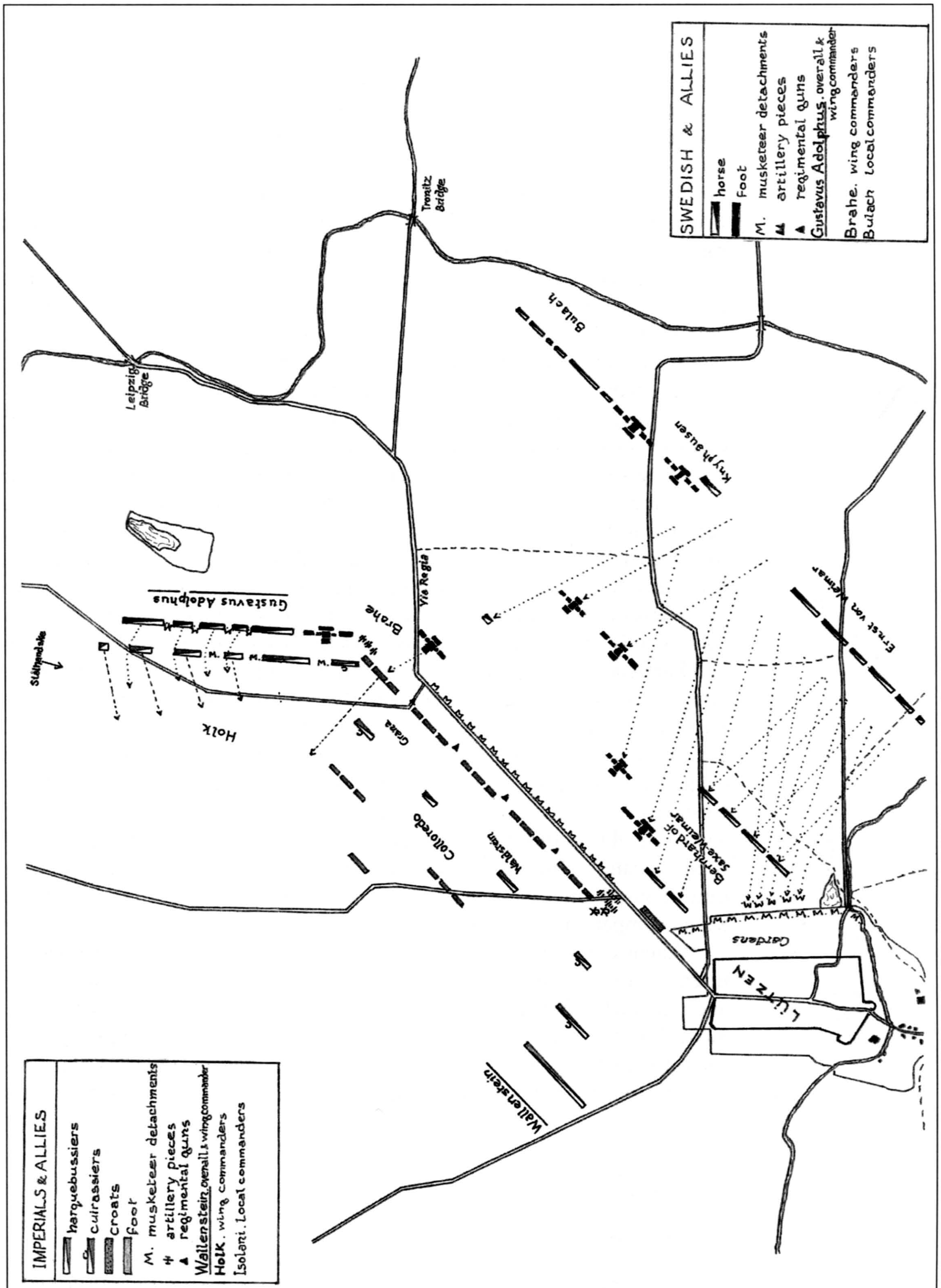
Gustavus Adolphus lying in state after the battle of Lützen. (Photo: Medströms)

The Imperial army had suffered greatly, too. Pappenheim was mortally wounded. Colloredo-Waldsee had suffered several wounds. The artillery commander, Breuner, was dead. Among the senior commanders, only Wallenstein himself and Holck remained.

Under Bernard and Knyphausen, the entire Swedish line again attacked. This time it was the turn of the Imperial troops to be pushed back. Under the personal direction of Wallenstein, the Imperial army slowly retreated northwards in good order. Wallenstein was in the heat of the battle. He was wounded, too, although fortunately for him the shot had lost most of its force, was spent on his armour, and the result was a mere bruise.

As night fell, both armies were exhausted. Wallenstein requested information on the remaining strength of his regiments. The results were discouraging, so he ordered a full withdrawal. He abandoned his baggage, artillery, and ammunition supplies.

After nightfall Pappenheim's infantry, under Heinrich von Reinach (d. 1645), arrived – too late to participate in the battle. Hearing that Pappenheim had fallen, Reinach wished to engage despite the late hour.


IMPERIALS & ALLIES
harquebussiers
cuirassiers
croats
foot
M. musketeer detachments
artillery pieces
regimental guns
Wallenstein. overall & wing commander
Holk. wing commanders
Isolani. Local commanders
SWEDISH & ALLIES
horse
Foot
M. musketeer detachments
artillery pieces
regimental guns
Gustavus Adolphus. overall & wing commander
Brahe. wing commanders
Bulach Local commanders
Leipzig Bridge
Tronitz Bridge
Bulach
Knyphausen
Via Regia
Gustavus Adolphus
Brahe
Stålhandske
Holk
Grana
Colloredo
Waldstein
Wallenstein
Ernst von Weimar
Bernhard of Saxe-Weimar
Gardens
LÜTZEN

Map 9. Lützen (2)

Wallenstein, no doubt correctly, regarded a continuation of the battle as too risky and ordered Reinach to retreat.[160]

With both sides of similar strength, the battle had been protracted and losses were great. The Swedes had lost some 4,000 to 5,000 dead and wounded, almost a quarter of the entire field army. Brahe died two weeks later from his wounds. The Imperial losses are difficult to estimate but were likely somewhat lower.[161] As noted, losses included Pappenheim, who died on the following day, and Breuner, but also many colonels, including Berthold von Waldstein, Wallenstein's nephew. Battle losses have been estimated as between 3,000 and 4,000 men;[162] however, many more were probably lost during the subsequent retreat.

Contemporary sources generally agree that Gustavus Adolphus, with a few officers, in his last moments encountered Johann von Götz's Imperial cuirassiers. There is a tradition that it was the lieutenant colonel of this regiment, Moritz von Falkenberg, who shot the King, after which almost immediately he fell from a Swedish gunshot. The exact truth in this story is unlikely ever to be ascertained. The death of Gustavus Adolphus, like that of many other famous individuals, was followed by numerous rumours, including some suggesting foul play. George Fleetwood reported a rumour that Francis Albert (1598–1642), Duke of Saxe-Lauenburg, who recently had defected to the Swedish side and served as a volunteer, had provided false intelligence on the day before the battle, and also had been involved in the King's death. He had been observed changing his dress during the battle, he was always at the King's side when he rode into combat, but then he held back with his followers, or claimed that the King was killed when nothing had happened. Within three days, he left the army, and then he everywhere proclaimed the King's death.[163] At least this was the story that somebody told Fleetwood. The Duke had indeed been close to the King in his final moments. Yet, by all accounts the entire story was a falsehood, which perhaps had its origin in the Duke's recent defection and the fact that in 1613 a very young Gustavus Adolphus once had argued and fought a duel with Julius Henry of Saxe-Lauenburg, the suspect's brother, before they reconciled and became friends again.[164] The war diary of the Swedish field chancellery contains no hint of suspicions against Francis Albert, who is mentioned as one of the King's companions in his final moments.[165]

Wallenstein, who knew that Duke George and the Lüneburg-Saxon army might be on its way, on 18 November abandoned his positions in Saxony and returned to Bohemia. From a strategic perspective, the battle had been a Swedish victory. The Imperial army had been forced to abandon its offensive against Saxony, the Swedish communication lines remained intact, Wallenstein could no longer pay his army from the spoils of Saxony, and it could be argued

---

[160] *Sveriges krig* 6, pp.442–53.

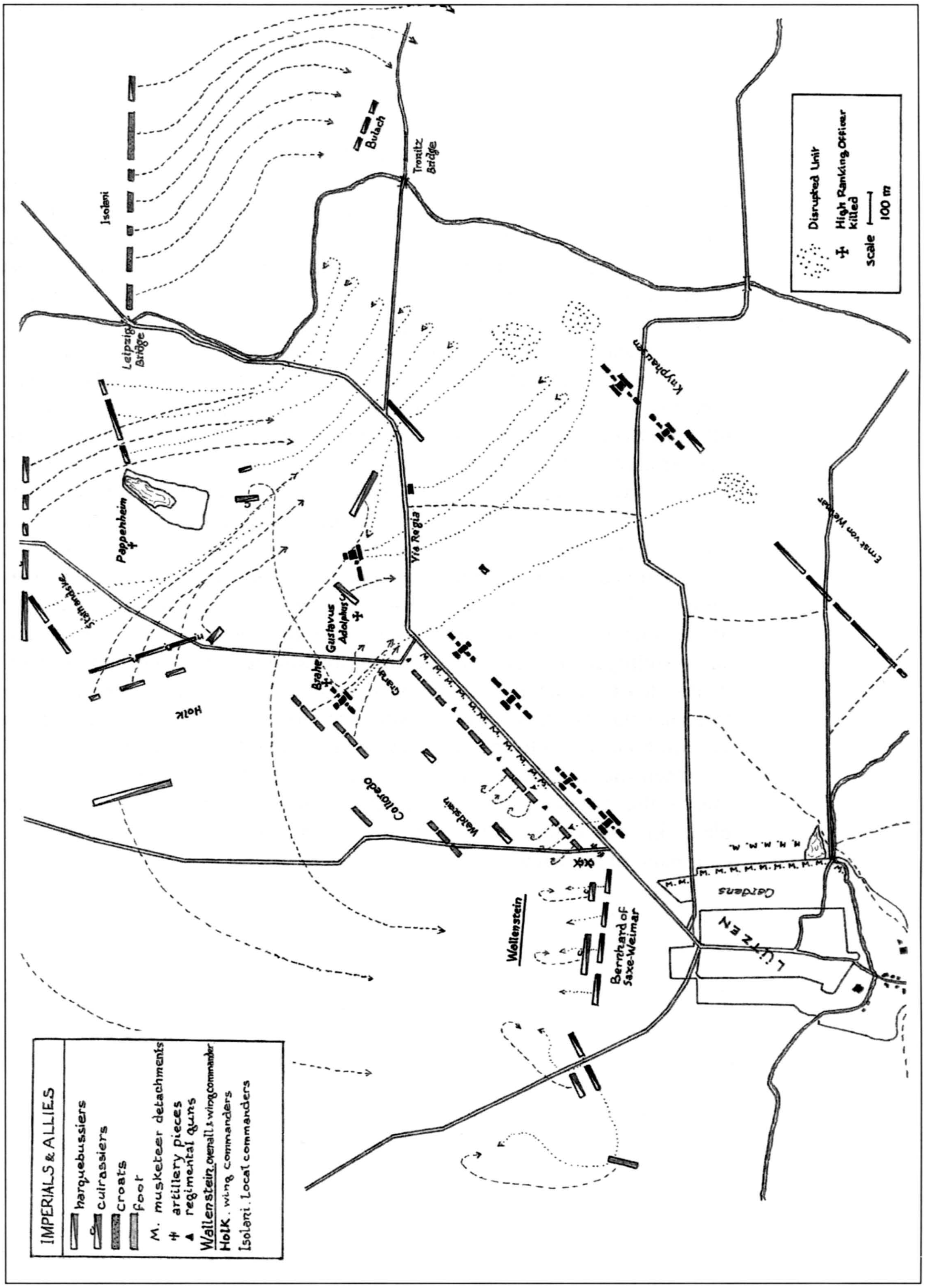
[161] *Ibid.*, pp.453–55.

[162] Gunnar Åselius, 'Lützen 1632', Lars Ericson et al., *Svenska slagfält*, pp.130–38, on p.138.

[163] George Fleetwood, 'A Letter from George Fleetwood to his Father giving an account of the Battle of Lutzen and the Death of Gustavus Adolphus', *Arquebusier* 17:4, pp.13–16. First published 1632.

[164] Ahnlund, *Gustav Adolf*, p.43.

[165] Zeeh and Belfrage, *Dagbok förd i det svenska fältkansliet*, pp.10, 63.


IMPERIALS & ALLIES
harquebussiers
cuirassiers
Croats
foot
M. musketeer detachments
artillery pieces
regimental guns
Wallenstein overall & wing commander
Holk wing commanders
Isolani Local commanders
Disrupted Unit
High Ranking Officer Killed
scale 100 m
Isolani
Bulach
Troritz Bridge
Leipzig Bridge
Pappenheim
Stalhandske
Holk
Via Regia
Gustavus Adolphus
Brahe
Colloredo
Waldstein
Wallenstein
Bernhard of Saxe-Weimar
LÜTZEN
Gardens
Knyphausen
Ernst von Weimar

Map 10 Lützen (3)

that with Pappenheim's death and the corresponding inability of the Imperials to continue operations in the Lower Saxon Circle, the Imperial cause was lost in the north, too. Indeed, Wallenstein was forced to ask Vienna for money, which in the end may have contributed to the Emperor's assessment that Wallenstein was a spent tool. Two years later, the general was assassinated.

However, the loss of Gustavus Adolphus shocked the Protestant alliance. A final victory over the Emperor no longer looked quite as possible as when the Swedish King was still alive. Bernard of Saxe-Weimar had the personality and ability to assume military command with confidence, but neither he, nor Oxenstierna, had the status and charisma to unify the Protestant cause. With the death of Gustavus Adolphus, it was obvious to all that no speedy conclusion of the war could be expected.

In the end, Gustavus Adolphus was found to be correct in his assessment that he could defeat Wallenstein in open battle. As King of Sweden, his strategic objective had been to thwart Wallenstein's strategy to cut the Swedish army off from the Baltic shore, which would have destroyed the Swedish presence in Germany. On behalf of the Protestant cause, Gustavus Adolphus's strategy had been to encircle the Emperor's core territories from the west and south-west, thereby preventing Spanish reinforcements from Brussels or Madrid to reach the Emperor by way of Cologne or the Rhine. Swedish intelligence had, in fact, in late 1631 noted that the Catholic League and the Empire regarded the Spanish Netherlands as their best territory for enlisting new soldiers.[166] At the time of Gustavus Adolphus's death, both strategic objectives had been successfully gained. Had he lived, would this strategy eventually have resulted in the defeat of the Empire? Such a question cannot be answered by the historian, but the soundness of his strategic choice shows Gustavus Adolphus's skills not only as a reformer and tactician but as a strategist as well.

When the Swedish army a few days after the battle again was ready to march, the King's embalmed body in a funeral casket took his customary place in the column. Symbolically, Gustavus Adolphus remained in command of his army.

---

[166] *Sveriges krig*, Suppl. Vol. 1, p.322.

2

Raising the Swedish Army

Available Manpower

'Other powers wage war because they are rich. Sweden, in contrast, must wage them because it is poor, to improve its material condition.' So said the Swedish diplomat, and former intelligence officer, Johan Adler Salvius (1590–1652) of Sweden's situation.[1]

Sweden had a small population (an estimated 1,350,000: some 850,000 in Sweden, 350,000 in Finland, and 150,000 in Estonia), an underdeveloped and poorly monetised economy, and an agricultural base that suffered from a short growing season. To aim for great power status under such conditions necessitated the development of an enduring system of raising troops.

The new national army introduced by Gustavus I, which by the 1550s consisted of some 15,000 men, grew only slowly. Far more were needed. Around 1615, Axel Oxenstierna prepared a proposal on the number of troops that were needed in times of peace: it concluded that Sweden needed 22,200 foot, 4,000 horse, and 544 artillerymen. The navy needed 4,560 sailors, 776 artillerymen, and 3,160 shipboard troops for its warships. In total, Oxenstierna's proposal suggested a total military establishment of 35,240. To this he added the existing garrisons, some 3,700 men, producing a grand total of 38,940. In similarity to many other of Oxenstierna's troop strength proposals, then and later, this was an ideal that could not be reached, For instance, in 1620, the real number of soldiers was listed as 19,356 foot and 2,177 horse.[2] Two years later, in 1622, the total number of sailors was still just above 2,000.[3] As for the army, it will be shown that it only reached the proposed numbers around 1623. Yet, the proposal still says something about Sweden's military needs.

During the wars of 1611 to 1617, we have seen that the total Swedish military establishment barely reached a strength exceeding 15,000 men, and expeditionary forces were no larger than 3,500 to 7,000 men. The field armies that Gustavus Adolphus brought to Livonia in 1621 and later were significantly larger, but still never exceeded 18,000. In late 1627, after years of almost constant conscription and enlistment, the estimated total number of men under arms and available for field operations was no more than some 32,000, deployed as summarised in Table 3.

---

[1] At the Commonwealth-Swedish peace talks at Lübeck in 1652. Frost, *Northern Wars*, p.114; citing Linage de Vauciennes, *Mémoires de ce qui c'est passé en Suède tirés des dépêches de Chanut* 2 (Cologne, 1677), pp.304–5.

[2] Hamilton, *Afhandling*, pp.56, 57.

[3] Ericson, *Krig och krigsmakt*, p.112.

Table 3. Total men under arms, late 1627; garrison units in Sweden, Finland, and Estonia and the few men of the retinue of nobles not included (source: *Sveriges krig* vol. 2, pp.388–9)

Theatre of Operations	Foot	Horse
Sweden	4,500	-
Finland	1,000	-
Livonia	5,000	1,500
Prussia	15,000	5,000
Totals	25,500	6,500

Yet, in 1630 Gustavus Adolphus brought over 38,000 men to Germany. In December 1631, the Swedish military presence in Germany again had more than doubled in numbers, then totalling almost 80,000 men. By November 1632, it had grown further, to 150,000 including allies. However, the vast majority were dispersed in garrisons and detachments that were tasked to protect the Swedish conquests. It was rare for a field army to exceed 20,000 men. Logistics could not cope with more.

The growth of the field army to a large extent depended on the enlistment of foreign soldiers. However, as the share of enlisted foreign troops in the army grew, the character of the field army changed. In 1612, about 85 percent of the soldiers came from Sweden and Finland;[4] in 1630, when we have seen that Sweden's total military establishment had grown to 72,450 men, the Swedish and Finnish share of the field army was only about 55 percent. The remaining 45 percent was enlisted elsewhere.[5] At Breitenfeld, and to an even greater extent Lützen, foreign enlisted troops constituted more than four-fifths of the Swedish field army.[6] The national contingent of the Swedish military presence in Germany remained fairly constant during the war, never exceeding 40,000 men. Many were assigned to garrison duties, in particular in the northern base areas. Instead foreign troops constituted the majority of troops in the field army.

---

[4] Lars Ericson and Fred Sandstedt, *Fanornas folk: Den svenska arméns soldater under 1600-talets första hälft* (Stockholm Armémuseum, 1982), pp.9–10.

[5] *Kungl. Svea livgardes historia* 3:1, p.616. The authors worked with a different set of figures: 38,772 of national origin and 32,536 enlisted, producing a total of 71,308 men.

[6] Åselius, 'Lützen 1632', Lars Ericson et al., *Svenska slagfält*, p.135.

By tradition, most Swedish troops were raised in the Swedish and Finnish heartland. Estonia provided only a few troops, primarily enlisted. There was no formal distinction between the territories of Sweden and Finland within the body of the Swedish state, and from 1570 onwards the number of Finnish troops (by which was meant anybody raised in Finland; both Swedish- and Finnish-speakers lived there and the records do not distinguish between ethnic or linguistic background) in the army grew dramatically, until Finns were disproportionally represented. In 1570, there had been only two Finnish companies while there were 31 Swedish. By 1601, there had been 25 Finnish and 68 Swedish companies, and by 1618, there were 23 Finnish and 36 Swedish companies.[7] In 1630, 12,000 out of 30,000 Swedish infantry (40 percent) and 3,250 out of 8,500 Swedish cavalry (38 percent) were raised in Finland. In total, it has been estimated that 15 percent of the adult male population of Finland served in the army.[8]

The reasons for this significant growth in the share of Finnish troops were two. First, geography: the sixteenth-century wars against Muscovy had been fought on Finland's border, which naturally focused military attention to the eastern half of the country, and during Gustavus Adolphus's Livonian war many Finnish troops, unlike their Swedish counterparts, were demobilised in winter and sent home instead of into winter quarters abroad, since travel to Finland late in the year was easier than crossing the Baltic Sea. Second, poverty: Finland was significantly poorer than the Swedish heartland, which meant that military service was regarded as no worse, and possibly better, than subsistence farming. The prospects of subsistence farming were uncertain, at best, where farmlands were scarce and the population growing. Over time, the poor farmlands probably constitute the chief explanation why Finland supplied troops at a level far above its relative share of the total population.

Death rates were high in military service, but soldiers need not abandon all hope. It has been estimated that from the conquest of Riga in 1621 to the battle of Lützen in 1632, some 50,000 Swedish and Finnish men died in military service.[9] The major share, 35,000–40,000 died during the wars of the 1620s.[10] Yet, the total corresponds to no more than four percent of the total national population, which even in times of peace suffered greatly from disease and sometimes famine. Besides, the annual number of deaths barely exceeded 4,000, which corresponds to an annual mortality rate of 0.6 percent for men of military age. In comparison, population data from the late nineteenth century show that unmarried males in the age group of military service then had an annual mortality rate approaching one percent even in peacetime.[11] Inhabitants of early modern market towns and population centres, in particular, suffered from an increased death rate, so townsmen were even more at risk than those in rural areas.[12] The major cause of death for adult men was disease and famine, regardless of where they lived. In other words, whether a man went to war or not, there was a significant risk of dying, but statistically, a battlefield death was not the greatest threat.

---

[7] Rainer Fagerlund, 'De finska fänikorna under äldre Vasatid: Forskningsläge och problem', *Turun Historiallinen Arkisto* 38 (Turku, 1982), p.99.

[8] P. Viirankoski, 'The Impact of Military Service on Finnish Rural Society in the 17th Century', *Turun Historiallinen Arkisto* 38 (Turku, 1982), pp.118–19.

[9] Sven A. Nilsson, 'Hemlandet och de stora krigen under Gustav II Adolfs tid', *Saga och Sed: Kungl. Gustav Adolfs akademiens årsbok 1973–74* (Uppsala: Annales Academiae Regiae Gustavi Adolphi), pp.132–65, on p.157.

[10] *Ibid.*, p.150. See also Sven A. Nilsson, *De stora krigens tid: Om Sverige som militärstat och bondesamhälle* (Uppsala: Studia historica Upsaliensia, 1990), pp.161–2.

Nobles

The Swedish and Finnish nobility was small but constituted the traditional core of the army and provided the bulk of the officer corps. By tradition, war was their primary purpose, and many, in particular among the Finnish nobility, benefited from military service. The character of the Finnish noble families changed rapidly during the reign of Gustavus Adolphus. In effect, the early seventeenth century saw the transformation of the Finnish nobility from what could be referred to as a group of illiterate, medieval-style strongmen into members of a pan-European nobility, which sent its sons to study at the great universities on the Continent. The Swedish nobility had experienced the same change, although in the previous century. The nobility's collective wealth increased rapidly, too, in particular with regard to tax-free land grants.

However, many nobles remained individually poor, and from the second half of the sixteenth century, state service became an important path of both economic and social advancement for them. While military service no doubt provided opportunities to most, service as administrators and what might be called civil servants provided rewards, too. During the seventeenth century, salaries formed an important and increasing share of the income of most nobles, with only the highest-born as an exception to the rule.

Yet, the almost uninterrupted wars of the previous century had by the time of Gustavus Adolphus produced a situation in which a significant share of the officer corps was not of noble but common origin. In addition, it was understood that the mobilisation of real aptitude included the ennoblement of talented commoners, who then had to rely chiefly on state salaries to support themselves. For them, military service was a career, not a social obligation. By 1610, commoners and newly created nobles constituted 14 percent of all cavalry captains and, yet more significantly, 68 percent of all infantry captains. The corresponding figure for colonels and generals was 11 percent.[13]

As before, the officers were provided with tax exempted farmsteads (*militiehemman*), appropriate to one's rank, as part of their salary.

---

[11] Jan Sundin and Sam Willner, *Social Change and Health in Sweden: 250 Years of Politics and Practice* (Swedish National Institute of Public Health Report 2007:21), p.124.

[12] Dilece Connor and Andrew Hinde, 'Mortality in Town and Countryside in Early Modern England', *Local Population Studies* 89:1 (2012), pp.54–67.

[13] Artéus, *Till militärstatens förhistoria*, pp.47, 50.

Conscripts

Common soldiers were needed as well, in particular for service on foot and as sailors. For this, the foundation had to be the old national army. However, its previous semi-voluntary character was clearly insufficient to produce enough men. The only answer, the Crown had realised early, was conscription (Swedish: *utskrivning*).

Conscription was the arbitrary raising of men from a population, in most cases from peasants on Crown land. Although resented, the concept still had a certain legitimacy, since conscription from 1544 onwards had to be granted by parliament, in which the peasants were represented. The conscripted soldiers had to be armed, trained, and supplied by the Crown. On the other hand, they could be used anywhere, overseas or at home, as well as indefinitely. Many peasants regarded conscription as a death sentence, which ultimately it often was, and numerous conscripts attempted to desert, especially before they were shipped overseas.

In 1619, Gustavus Adolphus decreed (in his *Organisation of Soldiers*) that all men were liable for military service from the age of 15. He argued that the age group eligible for conscription was 15 to 45, which he subsequently amended to 17 to 50.Yet, this rule was apparently not always followed.[14] The parish priests were ordered to maintain records of the entire male population so that nobody could avoid conscription and taxation. The requirement that those who wanted to travel needed a passport had been established already in the days of Gustavus I, and henceforth, it became illegal to leave one's domicile without a passport since this might impede conscription. The conscriptable male population (certain groups such as the elderly, priests, nobles and their servants, and those who for reasons of physical or mental health were unsuitable as soldiers were exempted[15]) was divided into groups of 10, each of which had to provide one soldier. Conscription meetings were held in every parish every third or fourth year, or during times of war, yet more frequently. In the early years of the reign of Gustavus Adolphus, conscription meetings took place almost annually due to the ongoing war. Among the peasants who served noble households, only one in 20 was conscripted, until 1627 when a conscription rate of 1 in 10 for all was introduced.[16] While this quota henceforth remained constant during the reign of Gustavus Adolphus, local conditions were taken into account. For instance, when the peasants of Norrland in 1629 expressed concerns due to poverty and inferior farming conditions, and serious protests took place, the quota there was reduced to 1 in 20.[17]

The conscription rate of 10 percent should not be regarded as oppressive per se. Major parts of Sweden and Finland for reasons of climate suffered

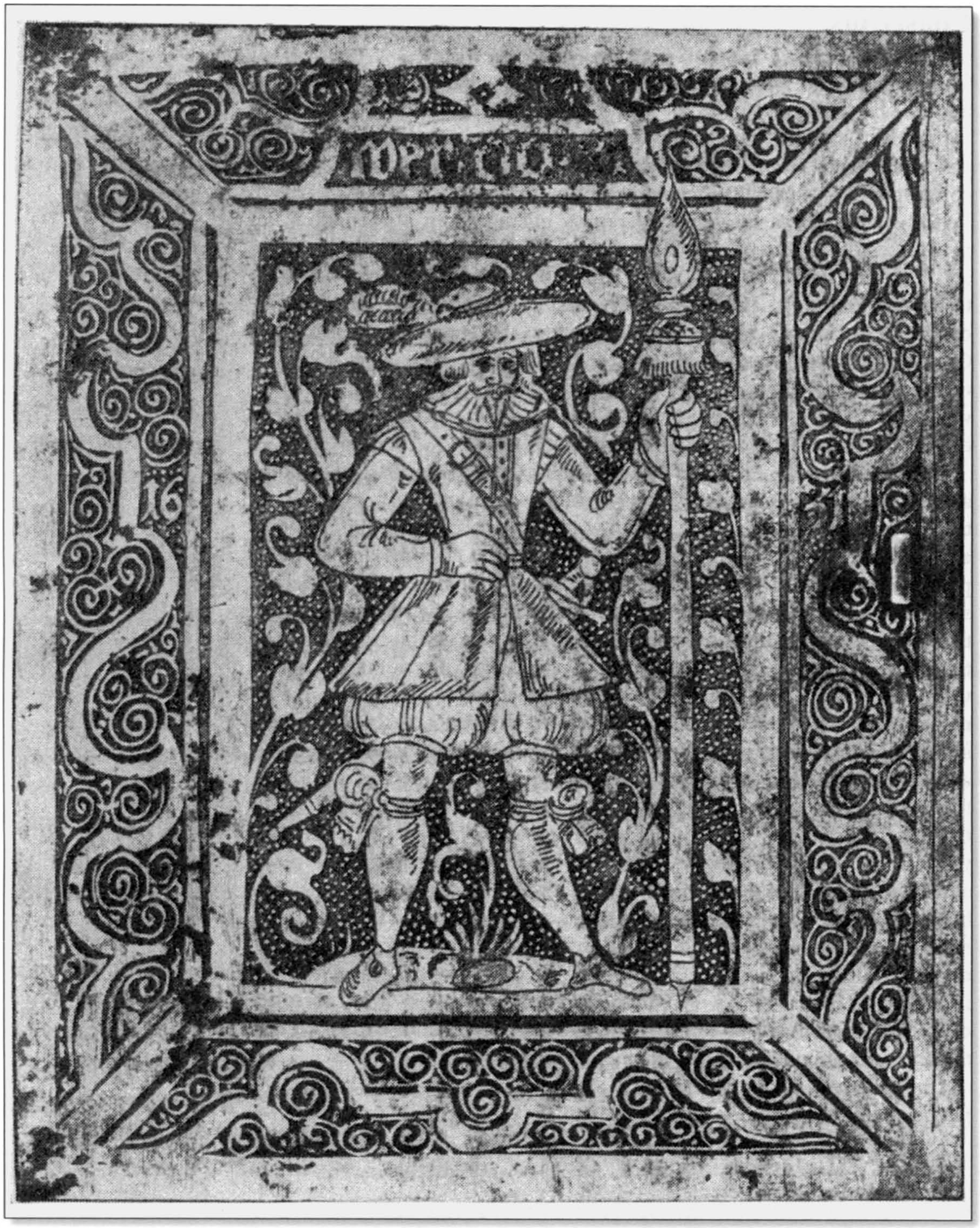
---

[14] Gustavus Adolphus, 'Krigsfolks-Ordning', pp.26–7, 59. Some accounts suggest that Gustavus Adolphus already in 1617 raised the conscription age from 40 to 60, and that he in 1620 raised it again until there was no upper limit. Barkman, *Gustaf II Adolfs regementsorganisation*, p.118; *Sveriges krig* 2, p.134.

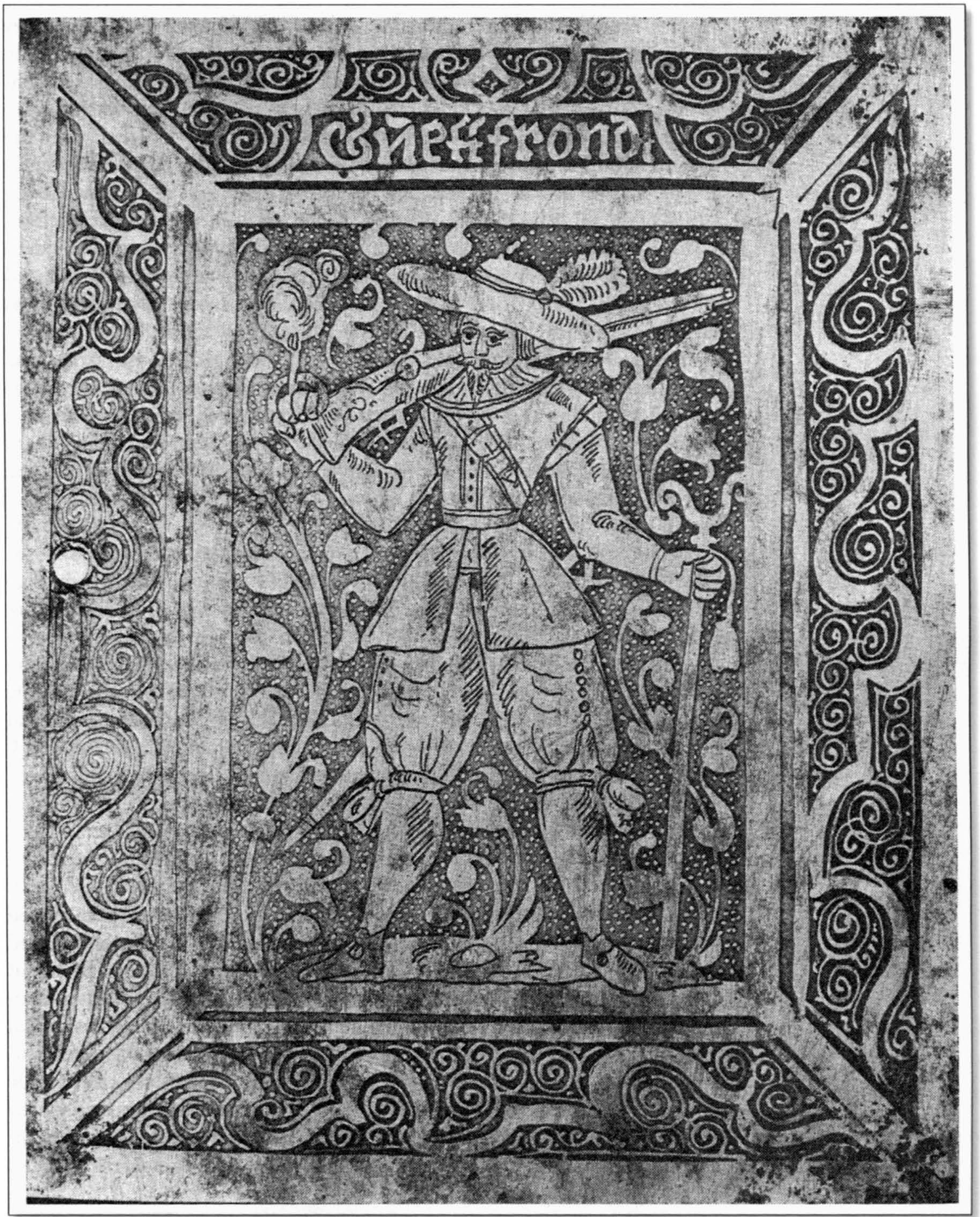
[15] Gustavus Adolphus, 'Krigsfolks-Ordning', pp.28–9, 36.

[16] Barkman, *Gustaf II Adolfs regementsorganisation*, p.117.

[17] Frost, *Northern Wars*, p.206; with references.



Officer with partisan, 1631. (Skokloster Castle)



Musketeer, 1631. His dress is of Continental type. The jacket has semi-long tails and shoulder straps with flaps. Trousers are longer and narrower than in the past. Shoes still have pointed toecaps. Steel etching on clock of unknown manufacture. (Skokloster Castle).

from a marginal agricultural economy. For many young men, a military career, even as a conscript, was preferable to the dreary and uncertain prospect of subsistence farming. When on duty, the conscripts were entitled to monthly pay. As of 1621, each also had the right to revenue from one-eighth of an allotted farmstead free from taxation.[18] Together with the system of military homesteads (*militiehemman*), this laid the foundation for the permanent allotment (*indelning*, 'division') of sources of revenue for the needs of the soldiers. In time, this became known as the *indelningsverk*, from a word perhaps best translated as the allotment authority (under Gustavus Adolphus and his immediate successors, the system was never introduced for the entire army. However, by the end of the seventeenth century, it was developed further to provide for all Sweden's military needs.[19])

Besides, the conscription officials worked together with the local community in selecting those who would become soldiers, and there was an understanding that certain situations including the previous loss of a husband or son in military service made the surviving sibling ineligible for conscription. Nobody wanted a farm to fall into ruin, if it could be avoided. Not its inhabitants, and not the officials, since the Crown then no longer would receive tax revenues from it.

Moreover, conscription, together with an increasing number of taxes, was more of a burden in the 1620s than in the 1630s, when the Swedish army to a considerable extent succeeded in financing its activities from revenues gained on foreign soil.[20]

Conscription usually took place in autumn. The new conscript was then told to remain at home during the winter. In spring, he must report for duty, after which he would be transferred to his unit. The other nine men, who had not been conscripted, were responsible for the conscript not running away. If so, the Crown had the right to conscript one of them instead.

Cavalrymen

As noted, the nobility still provided some armed and equipped cavalrymen who fought as cuirassiers in the retinue of nobles. It was no longer required for a noble to serve in person, since he could hire a cavalryman to attend in his stead. However, all officers in these units tended to be men from the nobility. This traditional military duty was known by an old name that can be translated as military service but originally signified service on horseback (Swedish: *rosstjänst*, *russtjänst*, *rusttjänst*). This duty was generally understood to begin around the age of 17.[21] The retinue of nobles was held to be the senior cavalry regiment in the army but usually only served at home, in defence of the country. The obligation to serve in foreign campaigns changed over time. Under Erik XIV, the retinue of nobles had been obliged to serve abroad but at own expense only for three months per year, after which the Crown had to cover costs. Under John III, the retinue of nobles only had to serve abroad for up to two weeks per year. Under Gustavus Adolphus, the retinue of nobles was required to serve at own expense for up to two months per year, when far away from home.[22]

---

[18] Hamilton, *Afhandling*, p.152.

[19] Michael Fredholm von Essen, *Charles XI's War: The Scanian War between Sweden and Denmark, 1675–1679* (Warwick: Helion, 2019), pp.22–4, 219.

[20] Ericson and Sandstedt, *Fanornas folk*, p.29.

[21] Hamilton, *Afhandling*, p.175.

Under Gustavus Adolphus, the retinue of nobles constituted three companies in Sweden and one in Finland. Later, a company was formed in Livonia, too. However, in the eyes of Gustavus Adolphus, the retinue of nobles was a disappointment. When called up for war in 1612, no more than 30 men showed up for service out of the entire retinue of nobles. Moreover, most were merely hired cavalrymen even though the nobles themselves were obliged to serve. Gustavus Adolphus reportedly described the resulting unit as a 'loose bunch of useless men'. Another eyewitness noted that no more than eight actual nobles served for the entire campaign.[23]

In 1617, one company consisted of 100 men. Clearly, this number was insufficient to provide for all Sweden's cavalry needs and the shortage of cavalry became yet more pronounced by the time of Gustavus Adolphus's overseas wars.

Moreover, the retinue of nobles was not called up during Gustavus Adolphus's overseas wars and was regarded as part of the defence of the homeland. In 1622, Gustavus Adolphus agreed, perhaps voluntarily, not to call up the retinue of nobles except for home defence. He also reduced their obligation to provide additional men.[24]

In 1623, the Crown expected that there would be a total of four companies of retinue of nobles cuirassiers, each of 125 men. This number was seldom achieved. In 1639, the Finnish retinue of nobles consisted of only 78 men.[25]

There were also enlisted cuirassiers. Several attempts were made to form new cuirassier companies. So was, for instance, in 1622 Field Marshal Jesper Mattsson Cruus (1576–1622), governor of Riga, to receive substantial lands in exchange for the raising of a company of cuirassiers. In the same year, Field Marshal Herman Wrangel was authorised the establishment of a fully armed cuirassier company. In 1623, Jacob De la Gardie and Henrik Fleming received lands in Livonia to raise cuirassier companies. In 1626, several other commanders, including Åke Tott, Gustav Horn, and Jürgen Aderkas, were authorised to raise of cuirassier companies. From 1622 Aderkas (d. 1631 at Breitenfeld) led the Livonian retinue of nobles. By 1625, there were nine cuirassier companies, under captains Georg Gustav Wetzel, Jürgen Aderkas, Claes Wachtmeister, Magnus von der Pahlen, Nicolaus Dietrich Sperreuter, Christopher Assarsson Mannersköld, Mårten von Ahnen, Gustav Horn, and Åke Tott.[26] In 1630, the Swedish army included at least 23 cuirassier companies, and in 1631, Gustavus Adolphus ordered no less than 4,000 suits of armour at one time of what generally and probably correctly has been interpreted as cuirassier armour.[27] All companies were not available for deployment. When Gustavus Adolphus led his army to Germany, he in the second wave brought from Sweden four companies of cuirassiers, to which was added nine companies of cuirassiers from Livonia.[28]

---

[22] *Ibid.*, p.173; citing a decision dated 10 January 1612 (O.S.).

[23] *Ibid.*, pp.179–80.

[24] *Ibid.*, p.182.

[25] *Ibid.*, p.58; Jägerhorn, *Hårdast bland de hårda*, p.159.

[26] Hamilton, *Afhandling*, pp.191, 196, 197, 201, 229. Some companies were raised by yet more senior officers and were occasionally referred to under their names.

Additional cavalry units were raised differently from the infantry, although the principal concept of military service in exchange for tax exempt farmsteads remained. Charles IX had in 1603 instructed that every cavalryman be provided a farmstead to provide for his upkeep and place of residence in times of peace. It also became possible for an individual to contract to provide a cavalryman with equipment in exchange for a farmstead exempt from taxation to defray the costs. Since the basis of the income was land revenues, this type of cavalry became known as territorial cavalry (Swedish: *landsryttare*, *landssåtare*). Some instead served as enlisted cavalry (Swedish: *besoldningsryttare*). They received pay and board, usually in a royal castle but occasionally in a farmstead, which then was compensated with tax exemptions. In reality, there was for this reason little difference between the two types of cavalry. They were also generally equipped and armed alike. Certain groups of specialists, too, who could afford to raise cavalrymen, went together to form cavalry units, in exchange for exemption from some types of taxation as well as conscription. These included the game wardens in 1611 and a group of mining professionals in 1612.[29]

From the 1620s onwards, cavalry was raised by the establishment of what was referred to as a cavalryman's holding (*rusthåll*), which consisted of one or more farms which individually or collectively contracted to support a cavalryman. The peasant or peasants would then hire a cavalryman whom they provided with a house and pay. In return, the provider received a substantial tax reduction. In comparison with the system to provide for soldiers on foot, this was a more individualised means to provide for soldiers through the permanent allotment (*indelning*) of sources of revenue – land – for their needs. From 1622, any priest, burgher, and professional, too, who owned a farmstead, was permitted to establish a cavalryman's holding just like a peasant.[30] Cavalry officers received land for revenues in the same manner as infantry officers, according to the system of military homesteads (*militiehemman*).

For a well-to-do peasant, it was a calculated risk whether to contract to support a cavalryman. If the cavalryman survived and remained in service, it was advantageous from a financial point to fund the cavalryman instead of paying regular taxes. On the other hand, if the cavalryman and his horse were lost in the war, the peasant would have to produce a replacement soldier and horse. If this happened within a year or two, the peasant made a loss. The establishment of a cavalryman's holding took an initial investment of

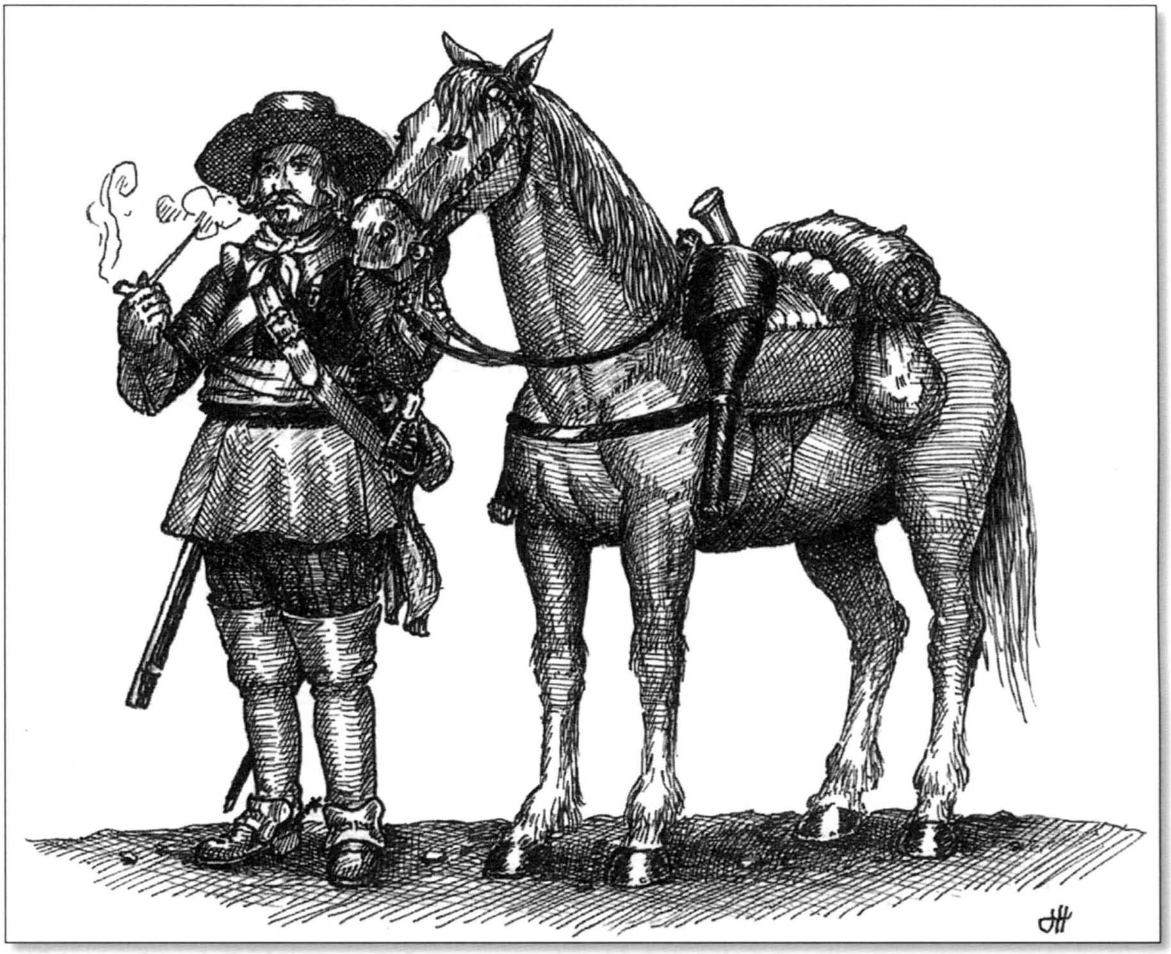
---

[27] Josef Alm, *Blanka vapen och skyddsvapen från och med 1500-talet till våra dagar* (Stockholm: Rediviva, 1975), pp.245, 246.

[28] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.118.

[29] Hamilton, *Afhandling*, pp.184, 187–8.

[30] *Ibid.*, p.190.



Swedish cavalryman. Unlike most Swedish cavalrymen, he also carries a carbine, which Gustavus Adolphus frowned upon. (Tommy Hellman)

approximately 87 Riksdalers, which was the total cost if the peasant or his son served in person. If not, a cavalryman could be enlisted for an enlistment bonus of 15 Riksdalers and a first year's salary of approximately 7.5 Riksdalers. The tax reduction was a nominal 30 Riksdalers. However, since the tax was paid in kind, and the nominal tax rate was undervalued, the produce thus saved could in most years be sold for 90–120 Riksdalers.[31] In other words, for a well-off peasant the investment in raising a cavalryman was well worth the risk. In particular many Finnish peasants chose to fulfil their tax obligations by raising and supplying cavalrymen.

Statistics show that the odds to survive as a cavalryman were not that bad, after all. On campaign, the mobility of the cavalry usually enabled it to find supplies and, if needed, better quarters than the infantry units. Accordingly, the cavalry suffered less attrition from starvation and disease than the infantry. Of those who served in the Finnish cavalry regiments in the period 1638–1649, about half survived the war.[32]

---

[31] Jägerhorn, *Hårdast bland de hårda*, pp.64–5.

[32] Ericson Wolke, Larsson; and Villstrand, *Trettioåriga kriget*, p.307; Jägerhorn, *Hårdast bland de hårda*, p.64.

In at least some provinces, most cavalrymen were peasants who each provided a horse and equipment and then served themselves. As an example, out of 110 cavalrymen in Olof Silverlood's company of Västgöta Cavalry Regiment in 1648, as many as 77 were peasants who served in person and another nine were the sons of such peasants (in one case, a stepson). The rest were men enlisted by such peasants. This means that almost 80 percent of the men in this company served in person.[33] Unlike the conscripted infantry, who usually were billeted or kept in garrisons, cavalrymen returned to their farmstead in times of peace.

The establishment of a cavalryman's holding was an attractive proposition to many. It was common that the duty was inherited, going from father to son or from husband to wife and children. Many widows requested to continue supplying a cavalryman, after the death of the husband. One of them, Karin Larsdotter, had lost four husbands and a son as cavalrymen. As a result, she requested support and eventually received a pair of pistols from the Crown for the next cavalryman she would provide.[34]

Naval Officers and Sailors

Although less noted abroad than his victories on the battlefield, Gustavus Adolphus was an accomplished naval officer, knew his way around a warship, and on several occasions personally commanded warships and whole fleets.

Before the reign of Gustavus Adolphus, and in particular before the 1620s, there was no real separation of Sweden's armed forces into an army and a navy. The King's officers served both on land and at sea, as did the King himself. The military personnel consisted of cavalry, infantry, artillerymen (gunners), and sailors, and it was only the cavalry units which, for obvious reasons, never were expected to serve at sea. Infantry and gunners in particular were often called out for shipboard service. Sweden had a modern navy, but before the reign of Gustavus Adolphus, the supply of personnel to the navy had been neglected. The tradition since the Middle Ages for some towns and coastal regions to provide men and ships if called to war, and at other times pay a tax for the King's naval costs, had long since grown obsolete. It was still understood that certain groups with the required monetary resources, such as priests and burghers, would provide sailors when needed. However, it was unclear what should be done to retain the service and replenish the numbers of sailors. In 1610, the Crown had ordered that those who hitherto had made sailors available also would have to provide for these sailors during the winter, and replace any sailors who were lost. This system did not function very well and was abolished at the time of the peace of 1613, at the latest.[35]

In 1614, Gustavus Adolphus began to reform the naval service. He had a cadre of 16 'ordinary captains' chosen out of twice as many who previously had been in the navy. This became the embryo of a small group of professional naval officers.[36] Naval officers were provided with farmlands to provide revenue for them to support themselves, just like their army counterparts.[37]

---

[33] Rumenius, *Wästgöta Ryttare*, p.17.

[34] *Ibid.*, p.18.

[35] Urban Skenbäck, *Sjöfolk och knektar på Wasa* (Stockholm: Sjöhistoriska museet, Wasastudier 11, 1983), pp.75–6.

In addition, Gustavus Adolphus enlisted a number of additional captains and officers, frequently of foreign, primarily Dutch, origin. Under-officers and common sailors, too, had to be enlisted.[38] Enlistment was an efficient means of retaining professionals in service; however, it was costly and for this reason disliked by the Crown. Nonetheless, remaining documents show that 300 professional sailors and 10 officers would be enlisted in the Dutch Republic in 1617.[39] Additional professional sailors would be enlisted both in Sweden and abroad in 1623. A special tax, a contribution, from the towns was raised from 1624 onwards to pay for a company of 350 enlisted professional sailors. The company was purely an enlistment structure (which, moreover, fell out of use in 1628), and the men did not necessarily serve together. The cost to pay for an enlisted company was three times that of a conscripted company, and the enlisted sailors had to be paid in cash instead of goods, all of which was bad news for the Crown's financial officers.[40]

For this reason, the bulk of naval personnel had to be conscripted. The first complete regulation for the conscription of sailors was issued in 1618. The procedure was similar to that of the infantry. One difference was that sailors generally were released from service during the winter, since they then were not needed and the Crown did not wish to support them. This, of course, meant that nobody knew whether they would report for duty again in spring. As a result, the conscription process customarily began with a request that any former sailors rejoin the service. Then, as with the army, one in 10 of all men liable for military service was conscripted. Most sailors were conscripted from coastal regions and towns. In particular craftsmen with the necessary skills to man warships frequently came from the towns. Following conscription, these craftsmen were ordered to bring their families to Stockholm, where they henceforth would live.[41]

From 1619, contracts with the Crown were put in place which meant that from this year onwards, and in particular during the period 1623–1630, certain geographical areas, chiefly those close to the sea, became exempt from conscription since they already were required to provide sailors by agreement. According to this system, a peasant would enter into a contract with the Crown to provide revenues for a sailor. His farmstead became known as a sailor's holding (*båtsmanshåll*). In return, the peasant benefited from tax exemption and freedom from conscription. Moreover, in a similar manner to the cavalryman's holding (*rusthåll*), the peasant who contracted to provide a sailor could choose either to serve himself during the formal six-month sailing season, during which his wife and children took care of the farm, or he could pay another person to serve.[42] Unfortunately, over time the sailing season tended to begin earlier and end later, which made it difficult for sailors far away from Stockholm, for instance those in Finland, to go home during the winter. For this reason, the sailor's holding system was abolished in 1630. Henceforth, most sailors were raised in the towns, according to regulations from 1629, and Finland was largely turned over to the army for raising troops.[43] However, in 1634 the sailor's holding system was restored, with all coastal regions in Sweden and Finland eligible. Although possibly intended as a temporary measure for the duration of the war, the system became permanent and was indeed extended further.[44]

---

[36] G. Hafström, 'Flottans återupprättande under Gustaf Adolfs regering', *Tidskrift i Sjöväsendet*, Jubileumshäfte Gustaf II Adolf 1632–1932, pp.27–45, on p.31.

[37] Skenbäck, *Sjöfolk*, p.78.

[38] Hafström, 'Flottans återupprättande', p.31.

[39] Hamilton, *Afhandling*, p.99.

[40] Skenbäck, *Sjöfolk*, pp.74–5.

[41] *Ibid.*, pp.72–4.

One could argue that the combination of the system of sailor's holdings with conscription among town craftsmen was merely a new version of the old system according to which some towns and coastal regions, if called to war, provided sailors in exchange for a tax exemption. With regard to the provision of sailing crews from a set of traditional coastal regions, this would be a correct assessment. However, the financial aspects of the system were quite different. The new system allowed the Crown to retain naval crews to a higher extent than in the past and would have worked admirably for a medieval fleet. However, warships had grown more complex than in the past, and although conscripts from coastal regions often had some boating experience, they lacked the technical skills and experience of blue-water sailors. Moreover, the navy's sailing fleet expanded greatly in size and numbers under Gustavus Adolphus's reign. In 1630, the Danish sailing fleet was still stronger than the Swedish. At the time, there were 42 Danish and only 31 Swedish warships in the theatre of operations. However, within a few years the Swedish navy significantly overtook the Danish one in number of warships.[45] Moreover, Swedish naval tactics changed, too, with a greater emphasis on manoeuvre and long-distance shooting than in the past. Yet, actual sailing seasons (not to be confused with the period during which the sailor was required to serve) were often short because of weather conditions, which did not provide sufficient time for training. As long as the bulk of sailors remained conscripts, the Swedish navy accordingly continued to suffer from inexperienced crews.

In 1620, Gustavus Adolphus appointed his half-brother, Field Marshal Carl Carlsson Gyllenhielm (1574–1650), Grand Admiral of the Realm (Swedish: *riksamiral*) and head of the navy. Gyllenhielm had been in French service as a young man, then returned home until he in 1601 fell into Commonwealth captivity. He spent the next 13 years as a prisoner of war, the first four years together with Jacob De la Gardie, who had fallen into captivity at the same time (De la Gardie was offered release after one year, but he then refused to abandon Gyllenhielm). When finally released in 1614, following an intervention by Gustavus Adolphus, Gyllenhielm had joined the war in Muscovy. Perhaps more importantly for the reform work, Gustavus Adolphus appointed Claes Fleming (1592–1644) to the position as the navy's second-in-command and admiral of one of the five fleets in which the navy was organised. Fleming was a young but experienced officer who already in 1613 had served on the Muscovite frontier in Jacob De la Gardie's Life Company. Two years later, he participated in the siege of Pskov. Soon Fleming also showed his skills as a naval commander. In time, he came to overhaul the navy establishment, improving it considerably.[46]

---

[42] *Ibid.*, pp.75–6.

[43] *Ibid.*, 79; Lars Ericson, *Svenska knektar: Indelta soldater, ryttare och båtsmän i krig och fred* (Lund: Historiska Media, 1995), p.58.

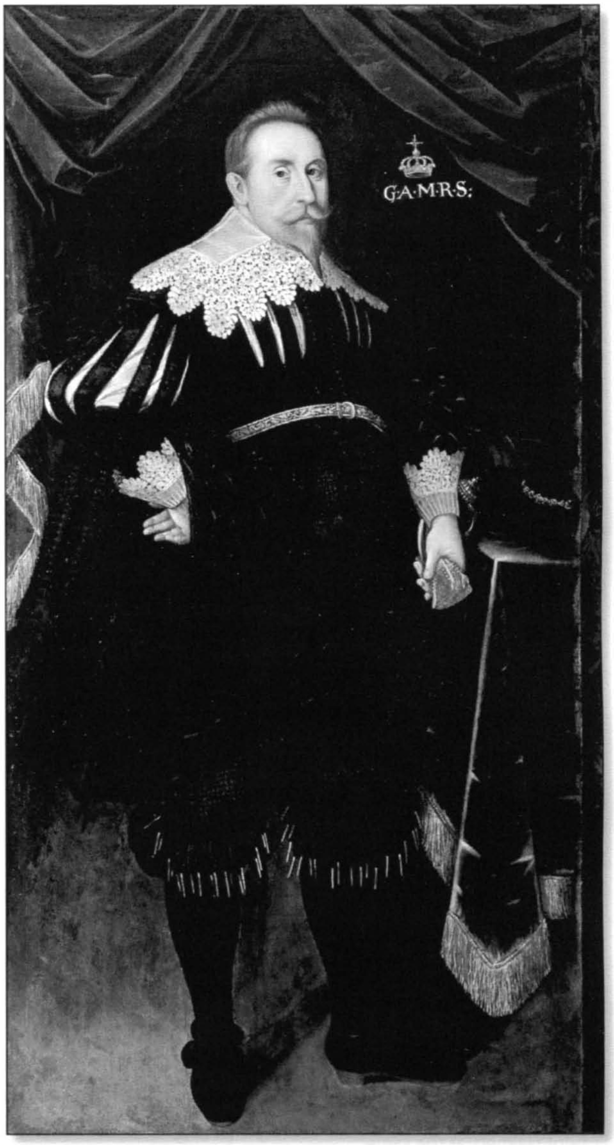
[44] Skenbäck, *Sjöfolk*, p.80.

[45] Jan Glete, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500–1860* (Stockholm: Almqvist & Wiksell International, 1993), pp.596, 607.

As noted, in 1622, the total number of sailors was just above 2,000.[47] This number increased until by 1629, the total number of sailors in service was some 3,200.[48] At the time of Gustavus Adolphus's death in 1632, the total number of sailors was 3,255. In addition, 2,730 soldiers were detached for shipboard duty.[49]

Unlike the army, the navy remained fundamentally native Swedish in composition. A key reason for this was the reliance on conscription and sailor's holdings. However, the practical need of having everybody aboard the ship communicating in the same language may have been a factor, too.

Although the navy began to acquire an identity separate from the army in the reign of Gustavus Adolphus, direct collaboration with army units remained a key duty. During the campaigns in Muscovy, naval squadrons, sometimes of shallow-draught vessels, frequently had to blockade enemy ports while the army laid siege to them, and there were constant naval actions on rivers and lakes. There was even an inland squadron on Lake Ladoga, and later, on Lake Peipus, to support the operations against Gdov in 1614. When Gustavus Adolphus invaded Prussia, the navy was called upon to blockade Danzig so to ensure the army's communication line. At first, the blockade was enforced only during the campaign season, from April or more likely May to October. The ships would then return home. However, sailing conditions in the southern Baltic were different from those in the north, so when



Gustavus Adolphus, late 1620s. (Skokloster Castle; photo: Medströms)

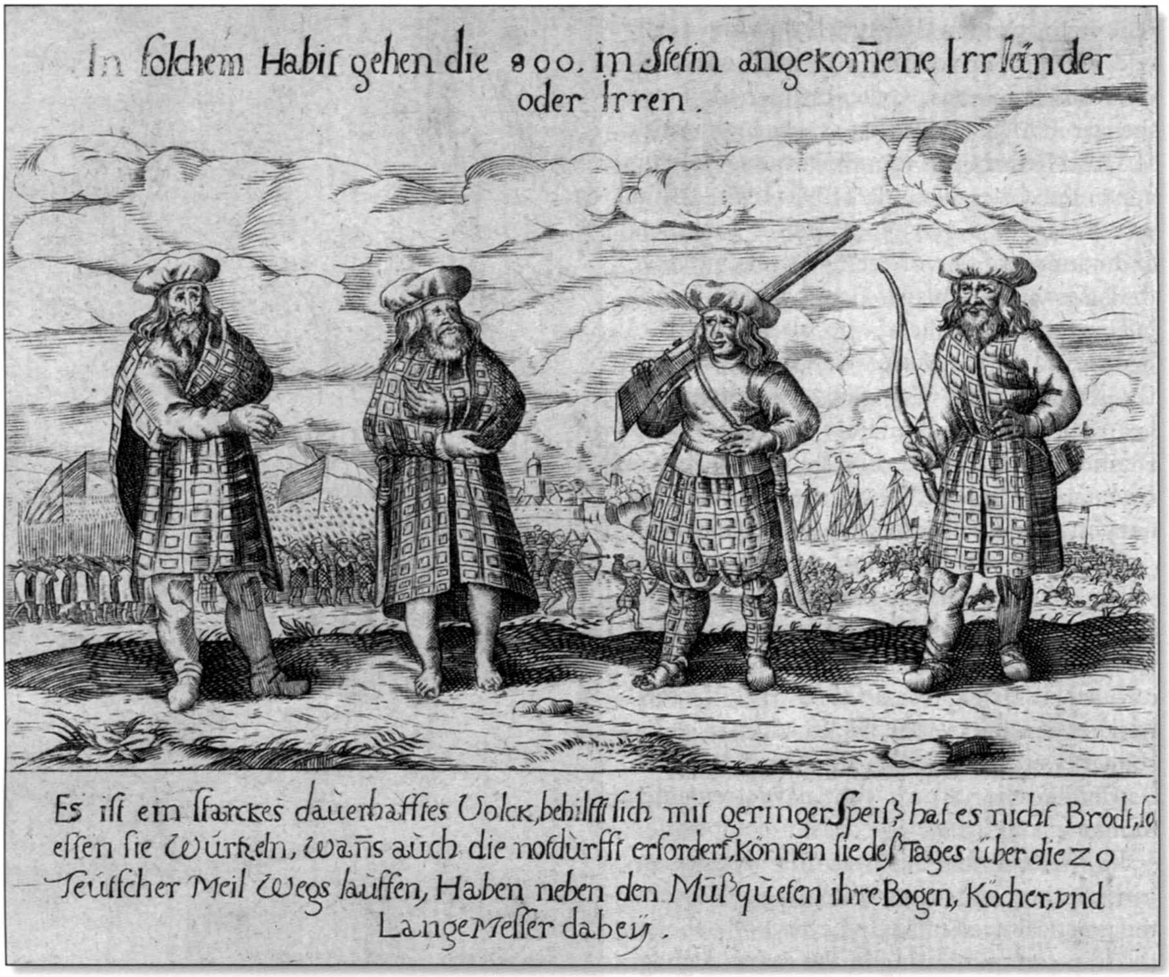
---

[46] Ericson, *Krig och krigsmakt*, pp.190–93.

[47] *Ibid.*, p.112.

[48] Skenbäck, *Sjöfolk*, p.81.

[49] Hafström, 'Flottans återupprättande', p.42.


In ſolchem Habit gehen die 800. in Stetin angekomene Irrländer oder Irren.
Es iſt ein ſtarckes dauerhafftes Volck, behilfft ſich mit geringer Speiß, hat es nicht Brodt, ſo eſſen ſie Würtzeln, wans auch die notdurfft erfordert, können ſie des Tages über die 20 Teutſcher Meil Wegs lauffen, Haben neben den Muſqueten ihre Bogen, Köcher vnd Lange Meſſer dabey.

The dress of the 800 Irish troops who arrived in Stettin to join the Swedish army, the print claimed, at the same time praising their stamina. While many newly enlisted soldiers arrived in peasant garb, whenever possible they were issued new clothes upon entering the army. (Photo: Medströms)

the Swedish ships returned home, Commonwealth privateers left port to cut off the Swedish supply lines. The privateers could operate freely in late autumn and early spring, because then the Swedish fleet was locked in by the ice in their home port. When Wallenstein in 1627 captured Wismar, the same happened there, but this time with Imperial ships constituting a new threat. For this reason, Gustavus Adolphus kept extending the sailing season until, in 1629–1630, the navy had to maintain an almost continuous blockade of the southern Baltic throughout the winter. The warship crews had to remain at sea for months at a time in treacherous weather with no friendly ports within easy reach. This was no mean achievement, since in winter the southern Baltic is no less dangerous than more northern seas due to storms, fog, and ice. Few other navies would have attempted the task.

Enlisted Troops

When funding was available, the Swedish Crown found it far more convenient to raise professional enlisted troops (German: *geworbne*; Swedish: *värvade*) on the Continent than to increase conscription rates at home, train the new recruits, and ship them overseas. Whole units were raised. Enlisted soldiers received monthly pay and their officers, in addition to pay, also received military homesteads (*militiehemman*). Farmstead revenues were allotted to enlisted common soldiers, too, in a similar manner to the one which provided revenues for Swedish conscripts.[50] From 1621, Gustavus Adolphus wanted his enlisted regiments to follow the Swedish standard of eight companies per infantry regiment. However, the strength of an enlisted company tended to vary from 120 to 200 men.[51] The enlistment of foreign troops was handled by individuals, usually noblemen, who had received a patent or contract to raise a regiment. An enlisted regiment might consist of infantry or cavalry.

When Wallenstein's conquests in northern Germany in 1627–1628 cut off Sweden from enlisting troops there, a greater effort was made to raise Scots, English, and Ulster Irish troops. Britain had been a source of troops for Sweden already in the sixteenth century, and Scotland in particular provided a significant number of soldiers and officers. Many remained in Swedish service for years, in some cases for life, rising to high rank. No less than 15 Scots rose to the rank of Major General or higher, and in Germany, Livonia, and Estonia, at least 57 Scots were appointed commandants of important towns and fortresses. In total, an estimated 14,000 Scots served in the Swedish army under Gustavus Adolphus.[52] Many only returned home in 1638–1640, in conjunction with the outbreak of the conflicts of the English Civil Wars. Having done so, they strongly influenced the development of British tactical doctrine by introducing the Swedish model of warfare (more on which below) with its emphasis on the firing of one or two close-range, three-rank salvoes followed by an immediate charge.[53] Gustavus Adolphus regarded the Scots as just as loyal as his Swedish and Finnish troops. Some 6,000 Ulster Irish were enlisted as well, but few actually joined the Swedish army.[54]

---

[50] Hamilton, *Afhandling*, pp.154–6.

[51] *Ibid.*, p.138.

[52] Alexia Grosjean, *An Unofficial Alliance, Scotland and Sweden 1569–1654* (Leiden: Brill, 2003); Ericson Wolke, Larsson; and Villstrand, *Trettioårigakriget*, 271.

[53] David J. Blackmore, *'Destructive and Formidable': British Infantry Firepower, 1642–1765* (Nottingham Trent University, dissertation, 2012), pp.40, 41, 55, 71, 79. While Blackmore hesitates to argue a Swedish origin of subsequent British tactical doctrine, the examples he provides, the Scottish and English returnees that he mentions (including Patrick Ruthven, who spent years in Swedish service, and Robert Monro, who wrote a manual describing what he had learnt of the Swedish model) or does not mention (such as Alexander Leslie who was in Swedish service even longer than Ruthven and rose to the rank of field marshal), the chronology, and references in English manuals to concepts such as the 'Swedes way' of military science, in my opinion constitute as clear evidence as we are ever likely to get of an early modern adoption of a tactical model. In fact, the British continued to follow the Swedish model even when it fell out of memory in the *Swedish* army, into which it had to be reintroduced by veteran officers during the Scanian War of 1675–1679. Fredholm von Essen, *Charles XI's War*, pp.19, 128–9.

[54] Harman Murtagh, 'Ireland, the Military Revolution and the Thirty Years' War', Jan Vilim (ed.), *Bellum Tricennale: XXIIIrd Colloquium of the International Commission of Military History* (Prague: Historical Institute of the Army of Czech Republic, 1997); Steve Murdoch, 'The Northern Flight: Irish Soldiers in Seventeenth-century Scandinavia', Thomas O'Connor and Mary Ann Lyons (eds.), *The Ulster Earls and Baroque Europe: Refashioning Irish Identities, 1600-1800* (Dublin: Four Courts Press, 2010), pp.88–109.

In 1629, Gustavus Adolphus sent agents to England, France, and the Dutch Republic to raise troops there in preparation for his planned landing in the Germany in the following year. And as soon as he had established a bridgehead in northern Germany, he rapidly raised additional troops through enlistment there.

However, the foreign troops had to be paid in cash. When the army was not paid, it would mutiny, in effect carry out a labour strike, until they received some satisfaction. In 1635, the German officers of the Swedish army in Germany held the Swedish Chancellor, Axel Oxenstierna, as a hostage in their camp near Magdeburg for some time for the arrears of pay owed them, until he promised that if they had not been paid when a peace agreement was signed, they could come to Sweden to collect the money owed.

Artillerymen

Artillery personnel were enlisted among semi-civilian professionals. Most artillerymen were enlisted within the Swedish kingdom, so the artillery arm in many ways remained national in composition. Both Swedish and Finnish artillerymen were moved to Stockholm for training. In war, infantrymen were temporarily detached to assist them as needed.[55] Artillery personnel were generally detached to the garrisons throughout the kingdom. Some were also included in the field army, when mobilised. In 1630 there were 425 artillerymen with the field army in Germany, 125 men in Prussia, 50 men in Stralsund, 100 men in Livonia, 100 men in Stockholm, and 200 men divided among the garrisons elsewhere in Sweden and Finland.[56]

Engineers and sappers, too, belonged to the artillery. The first seem to have been enlisted in the Dutch Republic in 1610, and this source of manpower henceforth continued to be important for the development of a Swedish engineering arm. In the field, the supply train, too, fell under the command of the artillery, including replacement arms supplies that were brought along by the field army.[57]

Levies

In times of war neither conscription nor enlistment provided sufficient manpower. If so, the Crown could still levy troops among the peasants. This was done through a quota that the peasants had to fill. Levied troops would not be trained, and they would have to pay for their own weapons and supplies. On the other hand, they were only required to serve at home. Levied troops were usually used to man defensive bastions along the external borders, in effect being a kind of border guard. The levied peasants would serve for a time, then be replaced by other levies from the same area. The

---

[55] Hedberg, *Kungl. Artilleriet*, p.25.

[56] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.295.

[57] Hedberg, *Kungl. Artilleriet*, pp.46, 304.

Crown directed that former soldiers should be selected as leaders of the levies.

In times of need, the Crown also had the right to raise a general levy. A general levy consisted of all men able to bear arms and usually was called out to defend an external border. The levied troops would have to arm and supply themselves. Their use was accordingly restricted, for practical reasons, to certain geographical areas and short durations of time. Levies could also be called out in the form of burgher militias, which would have to take some responsibility for defending their towns when under siege.

Since most military operations during the Thirty Years' War took place on the Continent, levies were rarely used except as border guards along the long borders with Norway, Denmark, Muscovy, and to some extent the Polish-Lithuanian Commonwealth. Yet they still played a military role. Levies were in 1623 raised in the provinces of Uppland, Östergötland, and Småland in anticipation of a Commonwealth seaborne invasion. In 1624, levies were also raised in Västergötland, Värmland, and Dalecarlia, since this time the Crown anticipated the possibility of a Danish invasion from the Danish territories in modern-day southern Sweden or Norway. Levies were then raised in Finland, too. In 1625–1626, levies were raised in all provinces because of the risk of invasion.[58] The levies were disbanded in early 1626, since the Swedish field army already was engaging the Commonwealth forces on their own territory and Denmark due to its entry into the Thirty Years' War no longer posed an invasion risk.

In times of war, yet another option was to raise additional, temporary troops from those areas that otherwise were exempt from conscription. This was decided by the Crown on a case by case basis and granted by parliament. This was referred to as a take-out (*utskott*). The troops raised in this manner were armed, trained, and supplied by the Crown, yet only needed to serve in the nearest theatre of war within the country and only for as long as the present war lasted. They could accordingly not be sent overseas. They were, in effect, temporary troops intended to be disbanded when the war ended.

The Crown in times of need also might negotiate additional cavalry from any individual or group in society that could afford to raise cavalrymen, such as the nobility, the civil service, the priesthood, and so on. Although the Crown then did not have to provide for men, horses, and weapons, such troops, similarly to the temporary troops of a take-out, only needed to serve within the country and only for as long as the present war lasted. Temporary troops were only rarely used during the Thirty Years' War.

Perpetual Soldier's Holdings

Since conscription never was popular, the Swedish Chancellor, Axel Oxenstierna, eventually began the process of abandoning the system of general conscription in favour of a new system of conscription based on military districts and administrative provincial regiments which raised field regiments for campaigns. This ultimately resulted in a process in which the individual province contracted to raise and maintain a regiment of a set size in both peace and war. Small farmsteads were allotted to provide revenues to common soldiers. Such a farmstead became known as a 'perpetual soldier's holding' (*ständigt knektehåll*), since the understanding was that it continuously would generate, and provide for, one soldier.

---

[58] Barkman, *Gustaf II Adolfs regementsorganisation*, p.183 n.1.

This practice was first established in the province of Dalecarlia in the mid 1610s. The exact year seems to be unknown. Dalecarlia in 1621 requested (and the Crown agreed) to raise 1,400 men (excluding officers and under-officers) according to the new system. This would correspond to 10 field companies. However, the system then seems to have already been in operation, which suggests an introduction year in the mid 1610s.[59]

Over time, the system of contracting perpetual soldier's holdings spread to other provinces. Eventually the cavalry, too, was organised into provincial regiments, although based on cavalryman's holdings instead of conscription and soldier's holdings. Since each provincial regiment was based on men from one particular province, the system eventually tended to result in a certain esprit de corps, with troops that due to family and community links performed well together. Moreover, it became normal for a regiment to have some of its companies at home, and some overseas. However, during the reign of Gustavus Adolphus, Dalecarlia was the exception, not the rule. Although the tendency began under Oxenstierna, the general adoption of the new system followed only after the Thirty Years' War. For instance, Hälsingland applied to contract in the same way as Dalecarlia only in 1650, but then the Crown rejected the application. A new application followed in 1664, but this application was only accepted in 1675.[60] The new system of perpetual soldier's holdings did not become commonplace before the reign of Charles XI (r. 1660–1697).[61]

Gustavus Adolphus's Articles of War

In 1621, Gustavus Adolphus codified his views on discipline and military legislation in what became known as his Articles of War.[62] Written field regulations had existed in the past, both on the Continent and in Sweden,[63] and it was customary already among sixteenth-century Landsknechts to read out the commander's 'letter of articles', a set of field regulations in the form of a contract, to which the men then had to swear an oath of obedience.[64] Gustavus Adolphus had studied previous contracts and regulations. However, his

---

[59] *Ibid.*, pp.134; Hamilton, *Afhandling*, p.106.

[60] *Ibid.*, pp.110–11.

[61] Fredholm von Essen, *Charles XI's War*, p.219.

[62] Gustavus Adolphus, *Krijgz articlar*. The King's handwritten draft version of the Articles is reprinted in Styffe, *Konung Gustaf II Adolfs skrifter*, pp.243–53.

[63] In 1158, Holy Roman Emperor Frederick I Barbarossa issued possibly the oldest preserved field regulation in Europe. Hans Delbrück, *History of the Art of War 3: Medieval Warfare* (Lincoln: University of Nebraska Press, Bison Books, 1990), p.246. In Sweden, the first Articles of War were issued by Gustavus I, dated 12 January 1545. Erik XIV issued Articles of War dated 10 February 1567, while John III issued a set dated 26 May 1583 (all dates O.S.). Hamilton, *Afhandling*, pp.9–12.

[64] Delbrück, *Dawn of Modern Warfare*, p.60.

Articles were orders, not a voluntary contract. Moreover, his Articles acquired an importance that arguably lasted far longer than any previous disciplinary contract. Having used them for a decade, he issued an updated version of them translated into German in 1632. The whole updated set was also translated into English, and then published in a commercial edition printed in London later in the same year for the benefit of British officers interested in the Swedish model of warfare.[65] Then in 1656, Swedish King Charles X Gustavus issued an updated version of the 1632 edition,[66] and his successor Charles XI in 1683 issued articles of war that were significantly influenced by those written by Gustavus Adolphus.[67] Moreover, the 1683 articles constituted the primary influence on and pattern for the Russian Articles of War issued by Tsar Peter the Great in 1716, which remained in force for yet another 150 years.[68]

The purpose of Gustavus Adolphus's Articles of War was to maintain discipline among what clearly was an unruly lot of soldiers and officers. A key means to keep the men in order was frequent and mandatory religious services. As elsewhere in northern Europe, it was mandatory for all men to attend services. However, the Articles give the impression that behaviour during services frequently did not quite live up to expectations. Various articles prohibited drunk and disorderly behaviour during sermons (Articles 3, 4, 7, 10). Perhaps more interestingly, the Articles also set down that any priest who showed up drunk for the service would be reprimanded, and on the third offence he would be dismissed from the camp (Article 8).

Many common soldiers, in particular the enlisted ones, regarded themselves as above the obligation of physical labour. It was for this reason forbidden, on pain of death, for a soldier to refuse to work when ordered to, whether it was as labour on fortifications or menial work in camp. Refusal was regarded as mutiny, for which the punishment was always death (Article 45, 57).

It was also necessary to maintain camp discipline. For this reason, it was forbidden, on pain of death, to raise the alarm in the camp at night without cause or to fire any gun (Article 51). Clearly, such unauthorised behaviour risked upsetting the entire camp, with the attendant loss of sleep and combat readiness.

The Articles of War also insisted on the need to remain with one's unit. It was forbidden to leave the unit either when deployed in the field or during marches, including to travel with the supply train, or to hitch a ride on the supply carts (Article 59). These prohibitions showed that such behaviour existed where discipline was lax.

Naturally, particularly harsh regulations enforced behaviour during battle. It was forbidden, on pain of death, to desert, and also not to fight to the end for the unit's standard (Article 58). Whoever first ran away from battle would forfeit his life. If he evaded capture, he would publicly be declared a scoundrel and outlaw (Article 64). It was forbidden for a unit to flee from the battle as long as its weapons could still be used. If it was the officers who were responsible for the flight, the officers would be deemed to have lost all honour and be dismissed from the camp. If the fault belonged both to officers and men, the officers would be punished as mentioned while every tenth soldier, drawn by lot, would be hanged. The survivors then had to serve without standard, sleep outside the camp quarters, and were detailed for cleaning duties in the camp (Articles 61, 62, 63).

---

[65] *The Swedish Discipline, Religious, Civile, and Military* (London: Nathaniel Butter and Nicholas Bourne, 1632), Vol. 2, pp.39–73.

[66] Printed 1657 by Amund Grefve, Gothenburg.

[67] *Karl XI:s krigsartiklar 1683* (Karlstad: Acedia Press, 1998).

[68] Evgenii V. Anisimov, *The Reforms of Peter the Great: Progress Through Coercion in Russia* (London: Routledge, 2015; first published 1993 by M.E. Sharpe), pp.64–5.

It was also forbidden, on pain of death, to surrender a bastion or redoubt until one had already endured three attempted storms, there was no hope for help, and the men faced certain death (Article 66). Likewise, if the soldiers forced a commandant to surrender a fortress, all officers and under-officers who supported the proposal would be executed, while every tenth soldier would be hanged (Article 74).

Then there were rules to regulate interaction with civilians. Any soldier who was proven to have raped a woman was executed (Article 88). Prostitutes were not allowed in the camp. However, a soldier was free to bring along his wife (and many did). If a soldier was unmarried and found to live together with an unmarried woman, he had to marry her (Article 89).

On friendly territory, it was forbidden deliberately to set any town or village on fire. On enemy territory, this was only permitted if ordered by one's captain, and no officer was permitted to give such an order unless it was authorised by the Commanding General (Articles 90, 91). It was prohibited to take cattle in friendly territory (Article 96). Furthermore, it was prohibited to loot, set fire to, or otherwise damage any church, hospital, school, or mill, unless so ordered by one's officer. It was also prohibited to violate priests, the elderly, women, maidens, and children, unless they took up arms against the soldiers (Articles 99, 100). When storming a town or fortress, it was prohibited to take any loot before all defenders had surrendered and the soldiers had been assigned their quarters in proper order (Article 98). This, of course, was necessary so that the men did not disperse for looting, thus opening up for a successful enemy counter-attack. Besides, a few years later Tilly's conquest of Magdeburg proved an eloquent example of what might happen if soldiers were let loose in a captured town.

The harsh punishment proscribed in the Articles of War generally succeeded in imposing discipline within the Swedish army. While transgressions certainly took place, records show that units from the Swedish army often posed less a threat to civilians in the area of operations than other armies. In the early years of the war in particular, Swedish national troops were kept under stricter discipline than others, which local inhabitants noted. In some German towns, landlords requested to be allowed to host Swedish national soldiers rather than German, French, or English ones, who were less disciplined. In some towns, Finnish soldiers were requested, for the same reason.[69] However, everything depended on the commanding officer, and as the war went on, many officers and men no doubt grew increasingly callous towards the non-combatants whom they encountered.

---

[69] Detlev Pleiss, *Bodenständige Bevölkerung und fremdes Kriegsvolk: Finnen in deutschen Quartieren 1630–1650* (Turku: Åbo Akademi, 2017), pp.102, 126, 319.

3

Army Organisation

The Introduction of Higher Formations

At the beginning of the reign of Gustavus Adolphus, the Swedish national military establishment was not organised in multiple-level formations. The only unit level that existed was the company. Each company was raised independently. The company accordingly constituted the only administrative and tactical unit, with the two roles combined into one. There was no permanent regimental organisation, nor did the battalion yet exist in Sweden. An army was raised by combining a number of companies. Although companies of foot would generally be deployed collectively in a line of battle, the line was a practical solution for battlefield use. It did not signify any kind of permanent identity.

This situation was clearly not in line with developments elsewhere in Europe at the time. Realising that it was insufficient merely to regulate the raising of troops, Gustavus Adolphus also began to develop a more up-to-date common organisational form for his military. The first known proposal to this effect was presented by Axel Oxenstierna in 1615, although resources then did not permit its full implementation.[1] At first, the new form mainly pertained to the old national army, that is, the primarily conscript army raised in the Swedish and Finnish heartlands. However, he aimed to introduce it in the enlisted units as well.[2] This is obvious from the German- and English-language manuals which eventually were published on how to organise an army in the Swedish manner. The publications included both organisational and tactical details for operations according to the Swedish manner and blank contracts with the organisational requirements for those foreign colonels who wished to enlist a unit for the Swedish army.[3]

---

[1] Hamilton, *Afhandling*, pp.128–9. Hamilton also reprints the proposal.

[2] Barkman, *Gustaf II Adolfs regementsorganisation*, p.88.

[3] Monro, 'The Manner to Exercise a Body of Musketiers', Monro, *Monro His Expedition* 2, pp.187–92; *Swedish Discipline* vol. 2, pp.39–73; *Swedish Discipline* vol. 3, pp.75–90; Lorentz von Troupitzen, *Kriegs Kunst: Nach Königlicher Schwedischer Manier eine Compagny zu richten, in Regiment, Zug-vnd Schlacht-Ordnung zu bringen, zum Ernst anzuführen, zu gebrauchen, vnd in esse würcklich, zu unterhalten* (Frankfurt-am-Main: Matthaeus Merian, 1633).

The Infantry Company

From the turn of the century until 1617, when the Peace of Stolbovo enabled Gustavus Adolphus to begin his reform programme, a Swedish company of foot varied in strength between 200 and 300 men.[4] The first step of reform was the introduction of a desired *establishment* strength. Although Gustavus Adolphus issued instructions on establishment strength, the results should not be interpreted too literally. Even a freshly raised unit might not have been able to achieve the desired strength, and as soon as the unit went on campaign, real strength tended to fall rapidly due to battlefield losses and, to an even higher degree, desertion, disease, and famine. Yet, the regulations on unit strength and organisation do indicate what Gustavus Adolphus preferred in his army. In the period 1618–1620, he expected an infantry company to have an establishment strength of 270 men.[5] The company was still an administrative unit, a vehicle for raising men. However, from 1621 onwards he began to plan for 'small' or field companies, that is, new units that were raised to be sent on campaign from the troop-producing 'great' or administrative companies. During the period 1621–1632, Gustavus Adolphus expected his field companies each to have an establishment strength of 150 men. From 1621, eight such companies constituted a field regiment, which accordingly had an establishment strength of 1,200 men.[6]

The smallest organisational component of the infantry company was the file (Swedish: *rote*; in seventeenth-century English often referred to as a *rott*), which consisted of six soldiers. However, the lowest *unit* within the company was the corporalship (Swedish: *korpralskap*), which consisted of 18 men (that is, three files) of pikemen or 24 men (four files) of musketeers. Musketeer corporalships moved separately, could be ordered to fire separately, and could even be deployed separately, when detached from its parent unit.[7] A musketeer corporalship was essentially the forerunner of the platoon, and as will be shown, corporalships that were detached and commanded to support a cavalry unit was soon also known as platoons (for instance, by Monro who referred to them as 'Plottons'[8]). Unlike the musketeer corporalships, a company's pike corporalships were not deployed or moved separately from one another.[9]

From 1621, a field company included three musketeer and three pike corporalships. A typical company accordingly had an establishment strength of 72 musketeers, 54 pikemen, and 18–19 officers and under-officers in what in modern terms could be referred to as a staff unit (Table 4). The infantry regiment as a whole, when such were formed, also had a regimental staff unit (Table 5).[10] By this time, the concept of officer had a broader meaning than later and often included non-commissioned officers (under-officers), drummers, and the like.

---

[4] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.81, 207.

[5] Gustavus Adolphus, 'Krigsfolks-Ordning', p.60. More detailed estimates suggest 272 men. Hamilton, *Afhandling*, pp.131, 134; Barkman, *Gustaf II Adolfs regementsorganisation*, pp.81, 207.

[6] Hamilton, *Afhandling*, p.136.

[7] Troupitzen, *Kriegs Kunst*, pp.11, 12.

[8] Monro, *Monro His Expedition*, vol. 2, p.65. Monro is vague on whether the unit he referred to as a platoon had a fixed strength. On the drill ground, his platoon consisted of 48 men (*Ibid.* vol. 2, p.184), which corresponds to two corporalships. On the battlefield, he referred to platoons of some 50 men (*Ibid.* vol 2. pp.31, 64), alternatively some 100 men (*Ibid.* 2, 114). He also mentioned platoons of no specified strength (*Ibid.* vol. 1, p.18; *Ibid.* vol 2, pp.64, 65, 68, 149).

[9] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.80–81.

Table 4. Composition of a Swedish infantry company staff, to which at times would be added four clerical servants and five supernumeraries in anticipation of losses (sources: *Swedish Discipline* vol. 3, pp.76–77; Troupitzen, *Kriegs Kunst*, pp.4–10; Hamilton, *Afhandling*, p.132; Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.10; Barkman, *Gustaf II Adolfs regementsorganisation*, p.219).

Position	1618–1620	1621–1632
Captain	1	1
Lieutenant	1	1
Ensign	1	1
Staff sergeant (Swedish: *fältväbel*; German: *Feldwebel*)	1	-
Sergeants	6	2
Armourer	1	1
Furier (Swedish: *furerare*; a sergeant with added duties)	1	1
Company standard bearer	1	1
Chaplain	1	-
Muster-roll scribe	1	1
Provost (Swedish: *profoss*; German: *Profoß*)	1	0-1
Barber-Surgeon	1	-
Corporals	6	6
Junior corporals	6	-
Drummers	4	3
Piper	1	-
Total	34	18–19

---

[10] Figures which of course add up to a total of 144 per company. See for example *Swedish Discipline* vol. 3, pp.76–77, 79; Troupitzen, *Kriegs Kunst*, pp.10, 61. Minor adjustments in organisation took place over time (for example Troupitzen, *Kriegs Kunst*, printed in 1633), and other totals frequently cited include, based on later research, 148 (Hamilton, *Afhandling*, p.137; Barkman, *Gustaf II Adolfs regementsorganisation*, pp.81, 207). We will constantly see that the figures of both muster rolls and manuals seldom add up exactly to regulations. Most units either had some surplus soldiers, in the expectation of losing men along the way, or more commonly, a deficit. Besides, a regiment also had a small staff unit which might be included in the establishment strength as part of the collective strength of the companies.

Table 5. Composition of a Swedish infantry field regimental staff (sources: *Swedish Discipline* vol. 3, p.76; Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.9; Barkman, *Gustaf II Adolfs regementsorganisation*, p.219)

Note. The colonel, lieutenant colonel, regimental sergeant major, and regimental quartermaster also acted in the capacity of company commanders.

Position	1618–1620	1621–1632
Colonel	1	1
Lieutenant Colonel	1	1
Regimental Sergeant Major (*regementsvaktmästare*)	1	1
Regimental Quartermaster	1	1
Regimental Scribe	1	1
Regimental Chaplain	-	1
Chaplains	-	3
Regimental Barber-Surgeon	1	1
Barber-Surgeons	-	3
Regimental Provost	1	1
Provosts	-	3
Military court scribe (*rättegångsskrivare*)	-	1
Military court sergeant (*rättegångsväbel*)	-	1
Total	7	19

In each company, one musketeer corporalship was put under the command of the *furier* (a rank at the time anglicised as 'furryer' or 'furryor' and translated into English as 'under-quartermaster').[11] This was a sergeant with added duties originally involving the provision of supplies, lodgings, and similar tasks – in short those that required some degree of independent command. This corporalship was designated as the 'forlorn troop' (seventeenth-century German: *verlorne Trop*).[12] In seventeenth-century German military terminology, 'forlorn' signified a unit that was 'detached' from the main formation. The term by then did not necessarily signify any particularly perilous duties. This corporalship was simply detached as needed.[13] In Swedish, the corresponding term was *(ut)kommenderad* ('detached').

---

[11] *Swedish Discipline* vol. 3, pp. 76, 77, 79, 82.

[12] Troupitzen, *Kriegs Kunst*, p.54.

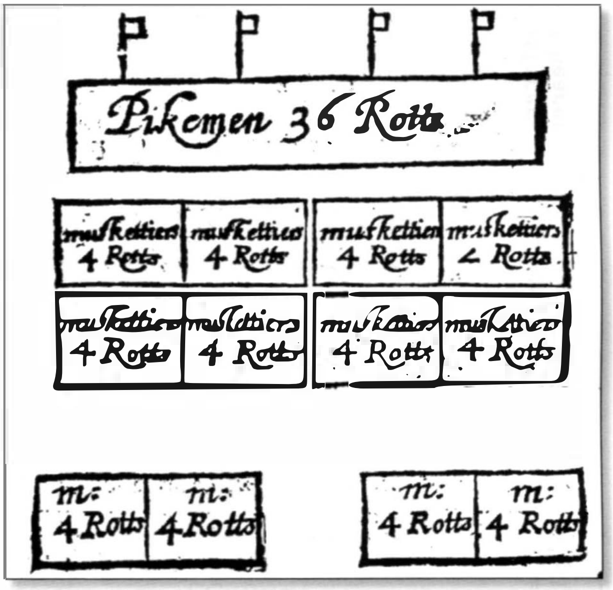
[13] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.12.

The Infantry 'Squadron' or Battalion

Although the musketeer corporalship might be detached and operate on its own, it was obviously too small to function as the army's primary tactical unit. The field company was too small, too. No later than 1621, Gustavus Adolphus instead introduced what he, following Continental terminology, termed the infantry 'squadron' (Swedish: *skvadron*; from Spanish *escuadrón*). The infantry squadron (hereafter for practical purposes referred to as battalion, a term that already was in occasional use as *bataillia*, *battalia*, *battaglia*, *battalion*, *bataillon*, or, in seventeenth-century Swedish, *Batalion*[14]) was a linear formation developed by Maurice of Nassau and a primary component of the Dutch model of warfare. Gustavus Adolphus had his battalion consist of four companies, that is, 600 men.

The battalion was quite flexible in its deployment. Although its basic formation was linear, in six ranks, with four corporalships of musketeers on either side of a central block of pikemen, the musketeer corporalships could just as easily be deployed in front of the pike block, behind them, or in various defensive formations in support of the pikemen. The pikemen were not as easily detached. They might divide into two sub-units, if the tactical situation so demanded, but this was far less common than the redeployment of the musketeer corporalships.[15]

While all musketeer corporalships could be redeployed as needed, yet more flexible were the *furier*-led corporalships. It will be recalled that in each company, one musketeer corporalship was distinguished by being led by a *furier*. When a battalion was formed, the *furier*-led musketeer corporalship of each company was detached from the main formation. Collectively, these corporalships were designated as 'detached' (Swedish: *(ut)kommenderade*) musketeers. However, contemporary Scots and English soldiers interpreted the Swedish term as the equivalent of the seventeenth-century German term *commendirte*, which also could mean 'commanded'. This made them translate the formation as 'commanded musketeers'.[16] Since



One way of deploying the battalion, with the musketeer corporalships behind the pike block, as described by Colonel Donald Mackay (Lord Reay). (***Swedish Discipline***)

---

[14] *Kungl. Svea livgardes historia* 3:1, 318 n.3; citing muster rolls in the Swedish Military Archives (KrA; Rullor vol. X/1617). The term *bataillon* appears in Bogislaff Philip von Chemnitz, *Königlichen Schwedischen in Teutschland geführten Kriegs* 1 (Stettin: Georg Rethe, 1648), pp.209, 465, 475.

[15] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.80–81.

[16] See for example Monro, *Monro His Expedition* vol. 2, p.4, which gives us the, at first, seemingly redundant expression 'with commanded Musketiers, under the command of Captaine Bullion' which of course refers to a detached unit under the command of the aforementioned captain. For the use of *(aus)commendirte*, see for example Chemnitz, *Königlichen Schwedischen* vol.1, which regularly uses the term with either meaning, including as *commendirte musqvetierer*. *Ibid.*, pp.342, 344, 464.

The Infantry 'Squadron' of Gustavus Adolphus

Front

```
                                                                    0
L             S  S               L  C         E       E             C E               C     E       C  L             S  S               L
X X X K  X X X K  X X X K  X X X K  I I K I I K I I I I I I I K I I K I I I I K I I K I I I I K I I K  X X X K  X X X K  X X X K  X X X K
X X X X  X X X X  X X X X  X X X X  I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I  X X X X  X X X X  X X X X  X X X X
X XDX X  XDX X X  X XDX X  X XDX X  I I I IDIDI I I I I I I IDIDI I I I I I I IDIDI I I I I I I IDIDI I I I  X XDX X  X XDX X  X XDX X  X XDX X
X X X X  X X X X  X X X X  X X X X  I I I IBI I I I I I I I I IBI I I I I I I IBI I I I I I I I IBI I I I I  X X X X  X X X X  X X X X  X X X X
X X X X  X X X X  X X X X  X X X X  I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I  X X X X  X X X X  X X X X  X X X X
X X X X  X X X X  X X X X  X X X X  I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I  X X X X  X X X X  X X X X  X X X X
                                    S               K  K            S K               S K         S

- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

Commanded Musketeers

Front

```
   F        F        F        F
X X X K  X X X K  X X X K  X X X K
X X X X  X X X X  X X X X  X X X X
X X X X  X X X X  X X X X  X X X X
X X X X  X X X X  X X X X  X X X X
X X X X  X X X X  X X X X  X X X X
X X X X  X X X X  X X X X  X X X X
   A        A        A        A
```

Key: 0 = Squadron commanding officer, C = Captain, L = Lieutenant, E = Ensign, F = *Furier*, S = Sergeant, A = Armourer, B = Company standard bearer, K = Corporal, D = drummer or piper, X = musketeer, I = pikeman

'commanded musketeers' accordingly became the common English-language expression, even today, for Swedish detached musketeer units, it will henceforth be used here, too. Besides, it was not only the British who adopted the term. The French did, too, and it regularly appears as *mousquetaires commandés* in the memoirs of Henri de La Tour d'Auvergne (1611–1675), Viscount of Turenne and Marshal General of France, who as we will see adopted major components of the Swedish model of warfare.[17]

Although they could be deployed as needed, commanded musketeers were chiefly used, as will be shown, to provide direct fire support to those cavalry units to which they were attached as infantry platoons. However, commanded musketeer platoons could also be used for other tactical tasks.

Over time, Gustavus Adolphus fine-tuned his military organisation. However, the battalion remained fundamentally unchanged during his reign. Each field regiment of 1,200 men divided into eight companies would form two battalions.

Later historians have occasionally tried to make more out of Gustavus Adolphus's infantry organisation than really seems to have been the case, describing an elaborate system in which each battalion was divided into a complete hierarchy of sub-units. We then find two corporalships of musketeers being formally referred to as a platoon, and two such platoons of musketeers being called a division. Likewise, six corporalships of pikemen would be called a division.[18] Monro does indeed describe a similar system in his exercise manual but as something used for parade or drill purposes.[19] Monro also mentions a battlefield practice of firing in divisions, which, if he used the term division as meaning a particular sub-unit of a certain size, indeed would be clear evidence for platoon fire (more on which below).[20]

However, there is little or no evidence to suggest that formal subunits of these kinds, even if they existed on the parade ground, were employed as tactical units on the battlefield. Besides, it is unlikely that such an elaborate system could be maintained in the field, in light of the considerable losses due to disease and other attrition that all units suffered. Manuals on the Swedish model of warfare issued immediately after the reign of Gustavus Adolphus describe a simplified organisational structure but still focus on the corporalship as the lowest unit, with two corporalships constituting what might be called a platoon and three platoons a company.[21] In the first official Swedish history of the war, proofread by Axel Oxenstierna and Queen

---

[17] *Histoire du vicomte de Turenne, Maréchal général des armées du Roi* vol. 3: *Contenant les Mémoires du M. de Turenne* (Paris: Jombert, 1773), pp.24, 28, 46, 256.

[18] Barkman, *Gustaf II Adolfs regementsorganisation*, p.81.

[19] Monro, *Monro His Expedition* vol. 2, pp.183–5.

[20] *Ibid.* vol. 2, p.190. Unfortunately, a close reading of Monro shows that he employs the term division for almost any kind of subunit. In his exercise manual, a division might consist of either six or 32 files of musketeers, or either five or 36 files of pikemen. *Ibid.* vol. 2, p.184. Neither corresponds to the organisation proposed by Barkman. Elsewhere, his use of the term is yet more ambiguous. 'The Regiment ... was drawn up in three divisions'. *Ibid.* vol. 1, p.4.

[21] Troupitzen, *Kriegs Kunst*, pp.14–26 with plates; Wendelin Schildknecht, *Harmonia in fortalitiis construendis, defendendis & oppugnandis* vol. 3 (Stettin: Johann Valentin Rheten, 1652), pp.160–63. The simplified post-Gustavus Adolphus company consisted of two corporalships of pikemen (48 men) flanked on each side by two corporalships of musketeers (48 men), that is, a total of 144 men plus officers. The pike corporalships had been reorganised to conform to the musketeer corporalships.

Christina before being sent to the printer, Bogislaff Philip von Chemnitz described the King's tactical doctrine. He also indicated what he considered most important in the infantry's organisation:

> The infantry deployed in their regiments and companies. The companies deployed in their established corporalships and files (*rotts*), each with its carefully selected senior and junior file leader (*rottmeister*), so that every common soldier, even without any order from an officer, already knew in which position he would stand and fight.[22]

In other words, the emphasis was on the corporalship and file leaders, and on the fact that each soldier had been trained in what he was expected to do in battle. The Swedish army relied on training and the existence of a sufficient number of under-officers who were able to act on their own initiative in the situation for which they had been trained. Training and personal initiative won the battle, not a complex organisational structure. In fact, it is unlikely that any more elaborate organisation could have survived the realities of battle.

The Establishment of Permanent Territorial Regiments of Foot

Unlike the battalion, regiments were already known in the Swedish army. However, when they existed, they were temporary in nature, usually enlisted, and had no standard establishment strength.

Gustavus Adolphus found this unsatisfactory. In 1617, he established a first system of permanent territorial regiments. The kingdom was divided into what best may be described as eight military districts, six in Sweden and two in Finland. Several districts included more than one province. Each district would raise one so-called territorial regiment (*landsregemente*) of foot (Table 6).[23]

Table 6. Military districts tasked to raise territorial regiments of foot (sources: Hamilton, *Afhandling*, p.130; Barkman, *Gustaf II Adolfs regementsorganisation*, pp.121–2)

Norrland (which also included Österbotten in modern-day Finland)
Uppland (which also included Västmanland and Dalecarlia)
Södermanland (which also included Närke and Värmland)
Östergötland
Västergötland
Småland
West Finland
Karelia

---

[22] Chemnitz, *Königlichen Schwedischen* vol. 1, p.475.

[23] Hamilton, *Afhandling*, p.130; Barkman, *Gustaf II Adolfs regementsorganisation*, pp.121–2, 124–6.

This by no means spelled the end of the enlisted regiments, which continued to be raised as needed and to the extent that funding was available.

Unlike the temporary field regiments, which were named after their colonels, the territorial regiments began to be known under the names of their provinces. They formed the embryo of what immediately after the reign of Gustavus Adolphus would develop into the series of provincial regiments, which henceforth would provide the backbone of the Swedish and Finnish military.

The organisational focus of Gustavus Adolphus lay on the battalion, not the regiment. Having established the battalion as the key tactical unit of his army, but still working with the old-type companies, Gustavus Adolphus aimed to establish an infantry regimental structure which was capable of forming six full battalions. For practical and financial reasons (that is, to avoid an excessive number of companies, which would be difficult for the colonel to control and, moreover, because the increased number of officers and under-officers would cost more to raise), the existing, 300-strong type of company was essentially retained. From 1618, a Swedish company had an establishment strength of 272 (or possibly 274) men, including officers and a staff unit of 34 men (Table 4).[24] In comparison with a Dutch company, the Swedish company had three times as many officers and under-officers.[25] To form the desired six battalions out of a territorial regiment, the latter had to produce 12 such companies for use in the field. However, it took time to reorganise the existing military establishment in both Sweden and Finland, and many territorial regiments could not reach the target of 12 field companies. Following widespread conscription in 1617, the total number of soldiers raised was no more than 10,083 in Sweden and 3,440 in Finland – a far cry from the desired establishment strength of more than 26,000 men.[26]

Conscription efforts continued, and in late 1618 the total nationally raised infantry strength was as summarised in Table 7.

Table 7. Nationally raised infantry, late 1618 (source: Barkman, *Gustaf II Adolfs regementsorganisation*, p.129)

Territorial Regiment	Territorial Colonel	Companies	Strength
Norrland	Svante Banér	7	1,609
Södermanland	Duke Charles Philip	5	1,000?
Östergötland	Bengt Kafle	4	1,400
Västergötland	Nils Stiernskiöld	7	2,034
Småland	Herman Wrangel	7	1,478
West Finland	Richard Rosencrantz	12	3,290
Karelia	Henrik Fleming	11	3,177
		Total	15,977

---

[24] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.89, 219.

[25] *Ibid.*, p.90.

[26] *Ibid.*, pp.91, 127–8.

In 1619 and 1620, conscription continued, additional troops were raised, but the total was still far from the desired establishment strength.[27] It might eventually have been achieved, but as we have seen, a new war intervened in 1621.

The Field Regiments of the 1621–1622 War in Livonia

From 1621 onwards, in anticipation of renewed war with the Polish-Lithuanian Commonwealth, the troop-producing system was changed. Henceforth, the territorial regiment would consist of territorial companies, each of which would raise one field company. Together, the field companies would join in the formation of field regiments. In comparison to the old field company, the manpower of the new field company was reduced, effectively halved, to an establishment strength of, as noted, some 150 men including officers, under-officers, staff unit, and a few supernumerary soldiers. The ratio of officers to men remained higher than in the Dutch model.[28]

Since Gustavus Adolphus still expected a territorial regiment to form six infantry battalions, it was necessary to increase the number of field companies produced by each territorial regiment. No less than 24 field companies were needed to form the six infantry battalions. For this reason, the companies produced by the territorial regiments from now on were fielded within a new structure, the two-battalion field regiment, each of which accordingly consisted of eight companies. The new structure was tested in the field during 1621 and 1622. The two-battalion regiment was referred to as the 'little regiment' or just 'regiment' so as to distinguish it from the troop-producing territorial regiment, which henceforth sometimes was referred to as the 'great regiment' (*storregemente*). In the modern literature, the new formation is often referred to as a field regiment.[29] The nationally raised infantry field organisation of the Swedish army in 1621 was planned as in Table 8.

Table 8. The nationally raised infantry field organisation, 1621 (source: Barkman, Gustaf II Adolfs regementsorganisation, p.133; based on *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:1, p.380)

Regimental Colonel	Companies	Strength	Military District
Gustav Horn	8	1,176	Norrland
Åke Oxenstierna	8	1,176	Uppland
Bastian Bonat	8	1,176	Södermanland
Arvid Hand	8	1,176	Östergötland
Johan Henriksson Rytter	8	1,176	Västergötland
Patrick Ruthven	8	1,176	Småland

---

[27] *Ibid.*, pp.129–31.
[28] *Ibid.*, p.91.
[29] *Ibid.*, p.92.

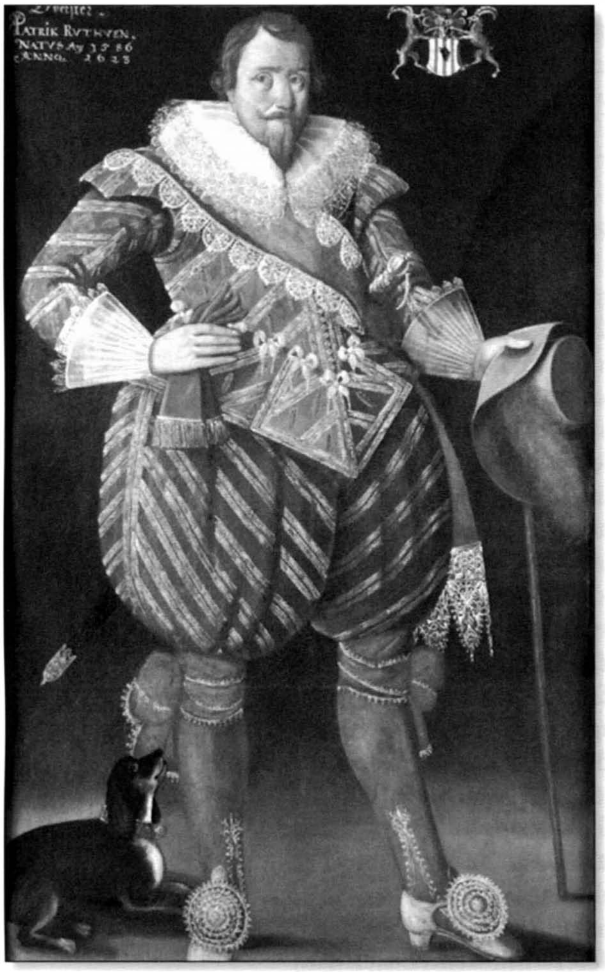
Regimental Colonel	Companies	Strength	Military District
Richard Rosencrantz	8	1,176	West Finland
Henrik Fleming	8	1,176	Karelia
Samuel Cobron	8	1,176	Combined regiment
Jost Clodt von Jürgensburg	8	1,176	Combined regiment
	Total	11,760	

As in the past, each field regiment was named after its colonel. This was necessary, since for practical reasons, field companies from more than one territorial regiment might be joined into one field regiment. Clodtvon Jürgensburg's Regiment consisted of four companies from Västergötland and two companies each from Östergötland and Småland. Cobron's Regiment consisted of one battalion each from West Finland and Karelia.[30] Samuel Cobron (originally probably Cockburn; *c.* 1574–1621) was an experienced officer who had been in Swedish service since 1606, participated in De la Gardie's campaign in Muscovy of 1609–1610, and played an important role during the war between Sweden and Muscovy of 1611–1617, during which Cobron fought under Gustavus Adolphus during the 1615 siege of Pskov. Jost Clodt von Jürgensburg (d. 1621) was a Swedish noble from Estonia of German origin who had been in the army since 1611.

The other regiments were formed from their respective territorial regiments. However, not all territorial regimental commanders could be assigned to the field army. Nils Stiernskiöld could not be spared from his primary military role, which was commandant of Elfsborg Castle and, in the King's absence, commander of the military forces in Sweden. Herman Wrangel's primary role was that of field marshal, which meant that he for practical reasons was unable to lead in person the field regiment that he had raised. Moreover, with Wrangel's departure from Småland, it was necessary to appoint an experienced officer as commandant of Kalmar. This became Bengt Kafle, who also served as commandant of Jönköping Castle which, like Kalmar, safeguarded the southern border with Denmark. Charles Philip (1601–1622), Duke of Södermanland, Närke and Värmland, who had distinguished himself in the siege of Riga had fallen ill and died early in the year, so he had to be replaced as colonel, too. For these reasons, their respective field regiments were commanded by the lieutenant colonels: Arvid Hand from the Östergötland Regiment, Johan Henriksson Rytter from the Västergötland Regiment, Patrick Ruthven from the Småland Regiment, and Bastian Bonat from the Södermanland Regiment. In the last moment, the colonel from the Uppland Regiment, Jesper Andersson Cruus, was replaced, too, by his lieutenant colonel, Åke Oxenstierna. The lieutenant

---

[30] *Ibid.*, p.133.


Patrik Rvthven. Natvs Ao 1586 Anno 1623

The Scotsman Patrick Ruthven (*c.* 1572–1651) had a reputation as a ***bon viveur***, because of his frequent carousing he acquired, in a pun on his real name, the nickname Pater Rothwein ('Father Red Wine'). (Georg Günther Kräill, 1623)

colonels appointed commanding officers of field regiments were immediately promoted to colonels.[31]

The field organisation was successfully attained, at least with regard to the raising of field companies. There were also two enlisted infantry regiments, under Philipp von Mansfeld and Jacob Seaton, respectively.[32] Moreover, the territorial regiments also succeeded in raising several garrison companies, which were needed in the border regions. In Finland, for instance, troops were available but there also was increased demand for garrison companies, in Finland as well as in Estonia and Ingria. As a result, each of Horn's, Oxenstierna's, and Ruthven's regiments also included two additional field companies, which were intended as garrison troops. In total, the field army of 1621 accordingly numbered more than 12,000 foot.[33]

The field establishment strength that had been achieved did not last very long. There were few combat losses in the 1621 fighting season, although Jost Clodt von Jürgensburg fell at Riga and was replaced by Christoffer Assarsson Mannerskòld. Johan Henriksson Rytter (1585–1644; later known as Reuter af Skälboö), who had already in 1605 fought at Kircholm, was badly wounded but survived. Rytter during the siege of Riga swam his horse across the River Dvina to build a temporary bridge. He then suffered a musket shot through his mouth and cheek, from which he eventually recovered. However, many men and four colonels were lost to disease. Lieutenant Colonel Konrad Techelborg replaced Bonat, but Techelborg himself died in early 1622 and in turn was replaced by Mattias Kagg. Lars Kagg replaced Arvid Hand. In the Finnish regiments, Nils Ribbing and Ernst Creutz replaced Richard Rosencrantz and Samuel Cobron. Some companies had to be combined which reduced the total number of battalions. The Finnish regiments in January 1622 returned to Finland, having suffered some 150 casualties each.[34] By the end of May 1622, the field army's nationally raised infantry strength accordingly was as in Table 9.

---

[31] *Ibid.*, pp.137–9.

[32] *Kungl. Svea livgardes historia* 3:1, p.317.

[33] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.134–7, 139.

[34] *Ibid.*, pp.139–40.

Table 9. The field army's nationally raised infantry strength, May 1622 (source: Barkman, *Gustaf II Adolfs regementsorganisation*, pp.139–40)

Regimental Colonel	Companies	Strength	of which disabled by illness
Gustav Horn	8	629	
Åke Oxenstierna	8	601	94
Mattias Kagg	8	660	
Lars Kagg	4	513	102
Johan Henriksson Rytter	8	781	203
Patrick Ruthven	8	811	
Christoffer Assarsson Mannersköld	8	779	299
	Total	4,774	698

Gustavus Adolphus had plans to increase the field army with four additional combined regiments, two from Sweden and two from Finland, in order to continue the campaign. However, the casualty rate was such that he had to lower his ambitions.[35] Still, a number of replacement units arrived in Riga during 1622 from both Sweden and Finland. Johan Banér replaced Lars Kagg as colonel of the field regiment from Östergötland, and Alexander Leslie replaced Mattias Kagg. By mid 1622, the nationally raised field army consisted of 10 regiments of foot (Table 10).

Table 10. Infantry regiments of the nationally raised field army, mid 1622 (source: Barkman, *Gustaf II Adolfs regementsorganisation*, pp.141–2)

Regimental Colonel	Companies	Military District
Gustav Horn	8	Norrland
Åke Oxenstierna	8	Uppland
Alexander Leslie	8	Södermanland
Johan Banér	8	Östergötland
Johan Henriksson Rytter	8	Västergötland
Patrick Ruthven	8	Småland
Nils Ribbing	8	West Finland
Henrik Fleming	8	Karelia
Ernst Creutz	8	Combined regiment
Christoffer Assarsson Mannersköld	8	Combined regiment
	Total	approximately 11,760

---

[35] *Ibid.*, p.140.

Although the reinforcement were sufficient to restore the infantry units of the field army to close to establishment strength, they were not enough also to restore the garrison companies. As a result, the field army remained understrength. Moreover, the replacements primarily consisted of new conscripts. The men lost had in most cases been experienced soldiers, and they were now replaced with raw conscripts. This obviously reduced the combat effectiveness of the entire army. There were also shortages in weapons and equipment. The armament industry had not yet been fully developed, so orders had been placed abroad, and the new supplies had not yet arrived. In June 1622, shortages within the field army included no less than 1,000 muskets, 3,456 helmets, 2,592 cuirasses, 1,000 rapiers, and an astounding 5,200 pikes.[36] Although more weapons may have been ordered than were immediately needed, at least the figures for muskets and rapiers correspond to known deficits within the regiments.

As a result, Gustavus Adolphus had to abandon most of his plans for the ongoing war in Livonia. Moreover, there were again tensions with Denmark. In autumn 1622, as noted, Gustavus Adolphus ultimately chose to negotiate a truce with the Commonwealth.

Another result of the wartime experiences was that Ernst Creutz's combined regiment of troops from Finland was redesignated as a third Finnish territorial regiment and given a newly created military district. Henceforth, it would constitute a peacetime organisation intended to raise a field regiment in the same manner as the other territorial regiments.[37]

The Defensive Posture of 1623–1624

In 1623, plans were made to increase military strength for the following year to nine territorial regiments each of which would produce three field regiments. In total, this meant a strength of 32,400 men in 27 field regiments.[38] In addition, there would be three enlisted field regiments of the same size, producing a grand total of 36,000 foot. The plan also envisaged a total of 4,375 horse.[39]

Gustavus Adolphus knew that this could not be achieved immediately and certainly not for war overseas. When he in 1623 attempted to persuade Maurice of Nassau, Prince of Orange, to join an alliance, current planning was for an expeditionary army consisting of 12 Swedish and six enlisted German and Scottish regiments, and 2,000 Swedish and 1,000 enlisted German cavalry, that is, a total of 21,600 infantry and 3,000 cavalry.[40]

However, we have seen that in 1623 and 1624, Sweden itself was at risk of invasion. It was accordingly equally important to maintain and develop the troop-producing territorial regiments and to ensure that defences would be available in case of a foreign invasion by sea, of the type that Sigismund had attempted in 1598–1599. For this reason, much of the existing war organisation (field companies and field regiments) was retained in the Swedish heartland, even though the territorial regiment was regarded as *the* permanent organisational unit. However, in Finland - which following the conquest of Livonia was less vulnerable to Commonwealth troops - the troops reverted to the peace-time organisation.[41]

---

[36] *Ibid.*, p.142 with n.1.

[37] *Ibid.*, p.143.

[38] *Ibid.*, p.150; citing a plan dated 28 May 1623 (O.S.).

[39] Hamilton, *Afhandling*, p.58.

[40] *Sveriges krig* vol. 3, p.119.

In Sweden, the men of the territorial regiments in Norrland, Uppland, Södermanland, and Västergötland were concentrated to the vicinity of Stockholm and the town of Södertälje, south of Stockholm, with the exception of a company from Västergötland which was sent to reinforce the Elfsborg Castle garrison. Those of the territorial regiments in Östergötland and Småland protected their respective provinces and deployed strong garrisons in the Baltic ports of Norrköping and Kalmar. In Estonia and Livonia, there were several field regiments and garrisons, while in Finland itself troops were concentrated around Åbo, Helsingfors, and Viborg. The Åbo and Helsingfors troops were earmarked for operations in Sweden, if the need should arise.[42] The territorial regiments then can be summarised as in Table 11.

Table 11. The territorial regiments of foot, 1624 (source: Barkman, *Gustaf II Adolfs regementsorganisation*, p.157)

Regimental Colonel	**Strength**	**Military District**
Gustav Horn	3,000	Norrland
Åke Oxenstierna	3,200	Uppland
Alexander Leslie	2,900	Södermanland
Bengt Kafle	1,500	Östergötland
Johan Henriksson Rytter	3,000	Västergötland
Herman Wrangel	2,850	Småland
Nils Ribbing	2,550	West Finland
Ernst Creutz	3,100	Central Finland
Henrik Fleming	3,330	Karelia
Total	25,430	

The territorial regiment in Östergötland was weakest, because the province suffered from the plague. In addition to the territorial regiments, some nationally raised infantry existed in Christoffer Assarsson Mannersköld's combined field regiment, which remained in Riga until the autumn of 1623.[43]

---

[41] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.152–3, 155–6.

[42] *Ibid.*, p.156.

[43] *Ibid.*, pp.154–5.

Christoffer Assarsson Mannersköld then assumed command of West Finland's territorial regiment, while Nils Ribbing accordingly replaced Johan Henriksson Rytter as colonel of the Västergötland territorial regiment. Patrick Ruthven was appointed colonel of the Småland territorial regiment, replacing Field Marshal Herman Wrangel who for obvious reasons had other duties. Other colonels of field regiments who had not also been colonels of territorial regiments were allowed to retain title and salary (Johan Banér, Lars Kagg, Mattias Kagg, and a certain Hemming Grass, who already had been a colonel for many years). Officers who were intended as commanders of field regiments (for instance, Wilhelm von Saltzburg in Västergötland, Thomas Muschamp and Otto von Scheiding in Småland) received only the rank of lieutenant colonel. This was in part for financial reasons (the Crown benefited since they then received a lower salary), in part so as to retain the seniority of the colonel of the territorial regiment.[44]

The Organisation of 1625–1626

In 1625, Gustavus Adolphus resumed the war against the Commonwealth in Livonia. Since the need to retain a military capacity in Sweden remained, more troops were brought to Livonia from Finland than from Sweden. In total, Gustavus Adolphus dispatched four field regiments from Sweden and five field regiments and a number of garrison units from Finland to Livonia.[45]

Meanwhile, the Swedish territorial regiments in 1625–1626 experienced a growing permanence with regard to their division into field regiments. As noted, a territorial regiment consisted of a number of territorial companies which in turn raised field companies. The territorial companies were now permanently assigned to field regiments. However, the plan still failed in the end, since it generally was impossible always to deploy the appropriate units of the territorial regiments together. Yet, the system approached a permanent field regimental organisation which to a growing extent was based on companies from the same province or county (Table 12).

Table 12. Organisation of the nationally raised field regiments of foot, 1626 (source: Barkman, *Gustaf II Adolfs regementsorganisation*, p.175)

Norrland: three field regiments, under Jacob Duwall (primarily based on Hälsingland), Daniel Bom, and Fritz Rosladin (primarily based on Norrbotten and Västerbotten).

Uppland: three field regiments, under Åke Oxenstierna (based on Dalecarlia), Jacob Seaton (based on Uppland), and Bengt Bagge (primarily based on Västmanland).

---

[44] *Ibid.*, p.161.

[45] *Ibid.*, p.174.

Södermanland: three field regiments, under Alexander Leslie (primarily based on Närke), Mattias Kagg (based on Värmland), and Ernst Ryning (based on Södermanland, but understrength).

Östergötland: three field regiments, under Johan Banér (primarily based on Östergötland), Lars Kagg (based on Jönköping County), and Erik Hand (understrength).

Västergötland: three field regiments, under Johan Henriksson Rytter (primarily based on Skaraborg County), Nils Ribbing (primarily based on Elfsborg County), and George Cunningham.

Småland: three field regiments, under Patrick Ruthven (based on Kalmar County), Otto von Scheiding, and Thomas Muschamp (based on Kronoberg County).

In Finland, Gustavus Adolphus directed two of the military districts to raise three field regiments and the remaining one, two field regiments. In addition, the garrison companies should be restored to establishment strength. However, in 1625 no conscription took place in Finland, so the demand could not be fulfilled. Gustav Horn, who in late 1624 had replaced Henrik Fleming as the colonel of the Karelian territorial regiment and in the following year was appointed commander of all military forces in Finland, found no other solution than to raise two additional combined field regiments, under Alexander von Essen and Hans Wrangel, respectively.[46]

The heads of the territorial regiments were the most experienced officers in the army, so they could hardly be left at home, only responsible for troop production. For this reason, the organisation of territorial regiments was gradually abolished. The field regiments accordingly became the highest formation within the army.[47]

Already in 1626, Gustavus Adolphus abolished the territorial regiment organisation in Finland. Realising that the manpower did not yet suffice to establish nine field regiments, he settled for eight. He linked the field regiments to geographical territory, with the result that the old military districts of West and Central Finland each should raise three field regiments, and Karelia two. It took time to reach the full strength in several regiments, and Karelia only succeeded in raising a third field regiment in 1632. The various regiments were named after their colonels: Ernst Creutz, Alexander von Essen, Hemming Grass, Arvid Horn, Gustav Horn, Christoffer Assarsson Mannersköld, Jacob Scott, and Herman Wrangel.[48]

---

[46] *Ibid.*, p.176.

[47] *Ibid.*, p.95.

[48] *Ibid.*, pp.177, 179.

The Wartime Organisation of 1626–1632

Having abolished the military districts and territorial regiments in Finland, it was only a matter of time before they were abolished in Sweden, too. The process began in 1627 and was concluded in 1629. Through this reform, the field regiments became independent. They also in most cases became yet closer linked to a particular province or county, in effect becoming provincial regiments.[49]

However, in most years the number of conscripts was insufficient to reach the target. In 1630, when Gustavus Adolphus invaded Germany, the Swedish provinces only managed to raise 16 regiments while Finland raised nine, in both cases with a few additional garrison companies or incomplete units, which as a total was slightly less than previously. In 1631, Sweden managed to raise a total of units corresponding to 18 regiments, while Finland in 1632 reached nine regiments.[50]

The demands of the war in Germany naturally led to an increased demand for troops. As the war progressed and casualties rose, it became increasingly clear that the wartime organisation no longer strictly could follow the geographical area of a regiment's conscription base. It became common that depleted units were refilled by whatever troops were available, and that field companies were moved from one regiment to the next.[51]

The Infantry Brigade

The Commonwealth war convinced Gustavus Adolphus of the need for a higher tactical formation than the battalion. Experience had shown that the battalion was too weak to be used as the primary tactical unit. In the Commonwealth, the situation had been tolerable. However, it would be different in Germany, where the army would have to face strong Imperial and League troops. The result was the introduction of the brigade.

In the battle of Dirschau on 17–18 August 1627,Gustavus Adolphus carried out a first field test of such a formation. He combined the infantry into tactical units each consisting of three battalions in an arrowhead- or wedge-shaped formation. The new formation became the first version of what henceforth became known as the Swedish brigade, which on paper consisted of four battalions (that is, two regiments), one of which was held in reserve.[52]

The brigade was an ad hoc structure with no permanent existence. Yet, for practical reasons the army needed predetermined deployment orders to avoid confusion. For this purpose, orders of battle were devised which indicated how the units should deploy in relation to each other. Although the order of battle was changed when circumstances so demanded, this created a field organisation which, although still ad hoc, gave the brigades

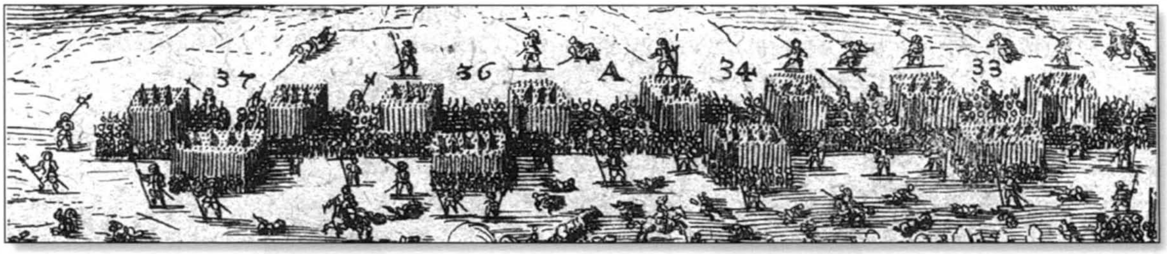
---

[49] *Ibid.*, p.182.

[50] *Ibid.*, pp.189–90, 193.

[51] *Ibid.*, p.191.

[52] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.76; *Kungl. Svea livgardes historia* 3:1, pp.526–7.



Four Swedish brigades in battle order, battle of Lützen, 1632. In reality, there were considerable gaps between the brigades to enable manouevring. (***Theatrum Europaeum***)

a degree of permanent identity and esprit the corps. The brigade was essentially a defensive formation, which probably can be explained by its conception during the war in the Commonwealth, when Gustavus Adolphus still had some doubts about his army's ability to withstand the Polish hussar. It became the standard tactical formation during Gustavus Adolphus's war in Germany. It is probably not a coincidence that the brigade formation's most successful battle was Breitenfeld, in which the Swedes essentially fought a defensive engagement.

The brigade was a departure from the Dutch model. The three-battalion brigade in a wedge-shaped formation was more reminiscent of the Spanish model, as it was then used, in particular when a fourth battalion was added in reserve, like the use of a fourth square in the corresponding Spanish formation.[53]

When deployed, the brigades were separated by sufficient distance so as to allow them to double up or to allow a cavalry regiment to pass between them. This is obvious from contemporary witnesses, including Monro, who explains the deployment as 'with a distance betwixt every Briggad, that a Regiment of horse might march out in grosse betwixt the Briggads.'[54]

The *Swedish Intelligencer* notes the same need for space to manoeuvre: 'We know, that betwixt every *Brigade* of Foote, there should be so much roome left, as that another *Brigade* might advance up between: the distance betweene them, being the breadth of one of them.'[55]

The contemporary prints of important battles often fail to show this, instead for artistic reasons depicting the brigades just next to each other and with the second line, the reserve, immediately behind the first. Unsurprisingly, contemporary participants in the battles noted that this was artistic license.[56]

There is no surviving contemporary manual or description in Swedish which describes how the brigade was organised and functioned. It was only in 1633 that Lorentz von Troupitzen published a German manual, *Kriegs Kunst*, which at least four decades later also was used for Swedish army training.[57] The perhaps best contemporary illustration and description of the brigade is the one provided by Sir Donald Mackay (1591–1649), 1st Lord Reay, the Scottish officer who raised Mackay's Regiment and who had much to do with the Swedish army from 1629 to 1631.

---

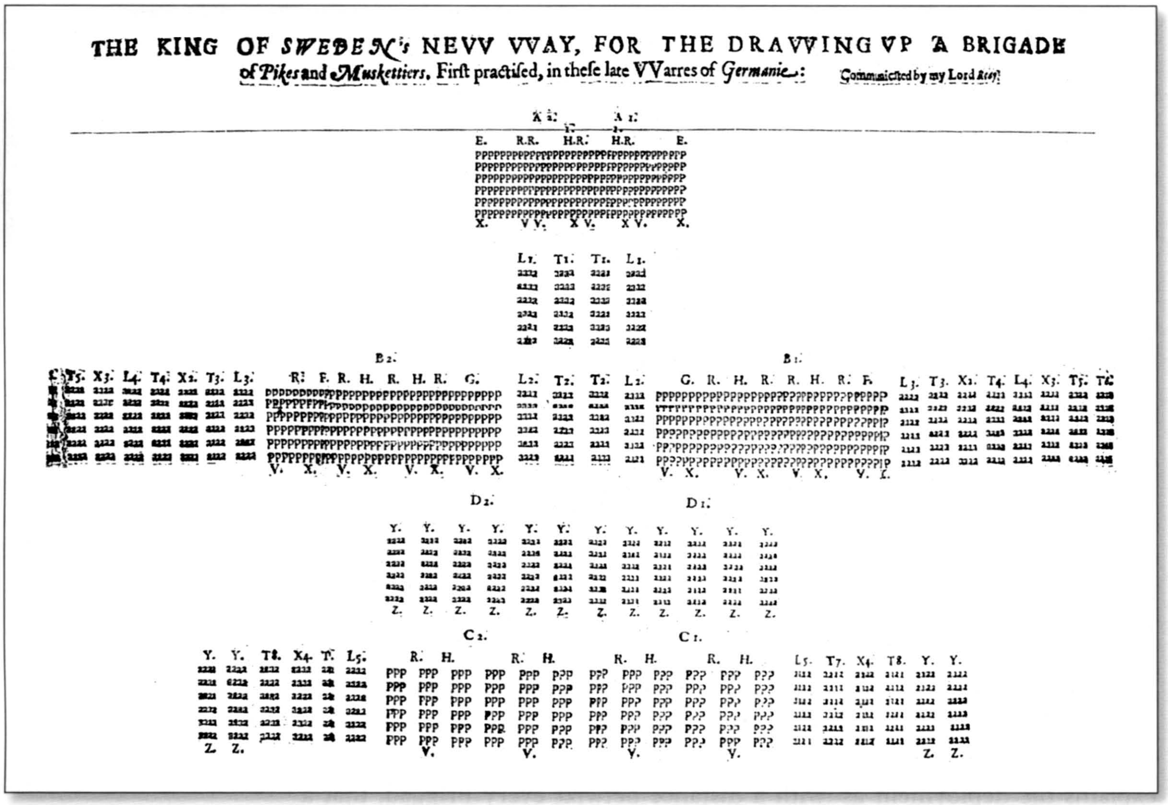
[53] Barkman, *Gustaf II Adolfs regementsorganisation*, p.97.

[54] Monro, *Monro His Expedition* vol. 2, p.64.

[55] *Swedish Intelligencer* vol. 3, p.130.

[56] *Ibid.*, p.130.

[57] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.106.


THE KING OF SWEDEN's NEVV VVAY, FOR THE DRAVVING VP A BRIGADE
of Pikes and Musketiers. Firſt practiſed, in theſe late VVarres of Germanie:
Communicated by my Lord Rey.

One of several ways of formation a Swedish brigade, as described by Colonel Donald Mackay (Lord Reay). This is a four-battalion brigade, which primarily was in use from about 1628 or 1629 to 1631. Earlier brigades commonly consisted of three battalions, and from 1631 onwards, manpower shortages meant that three-battalion brigades again became standard. Mackay and Monro watched a fully manned four-battalion brigade form up outside Stockholm in 1630 and likely based the description on this event. The ranks of individuals marked with the letter a are musketeers, formed in corporalships of four files, each six ranks deep. Pikemen are marked with the letter p. (*Swedish Discipline* 3, pp.81–2 with plate)

Mackay and Monro, who later became colonel of Mackay's regiment, attended a display of the brigade in Stockholm in April 1630 so as to be able to form up their regiment in the new style. Monro explains:

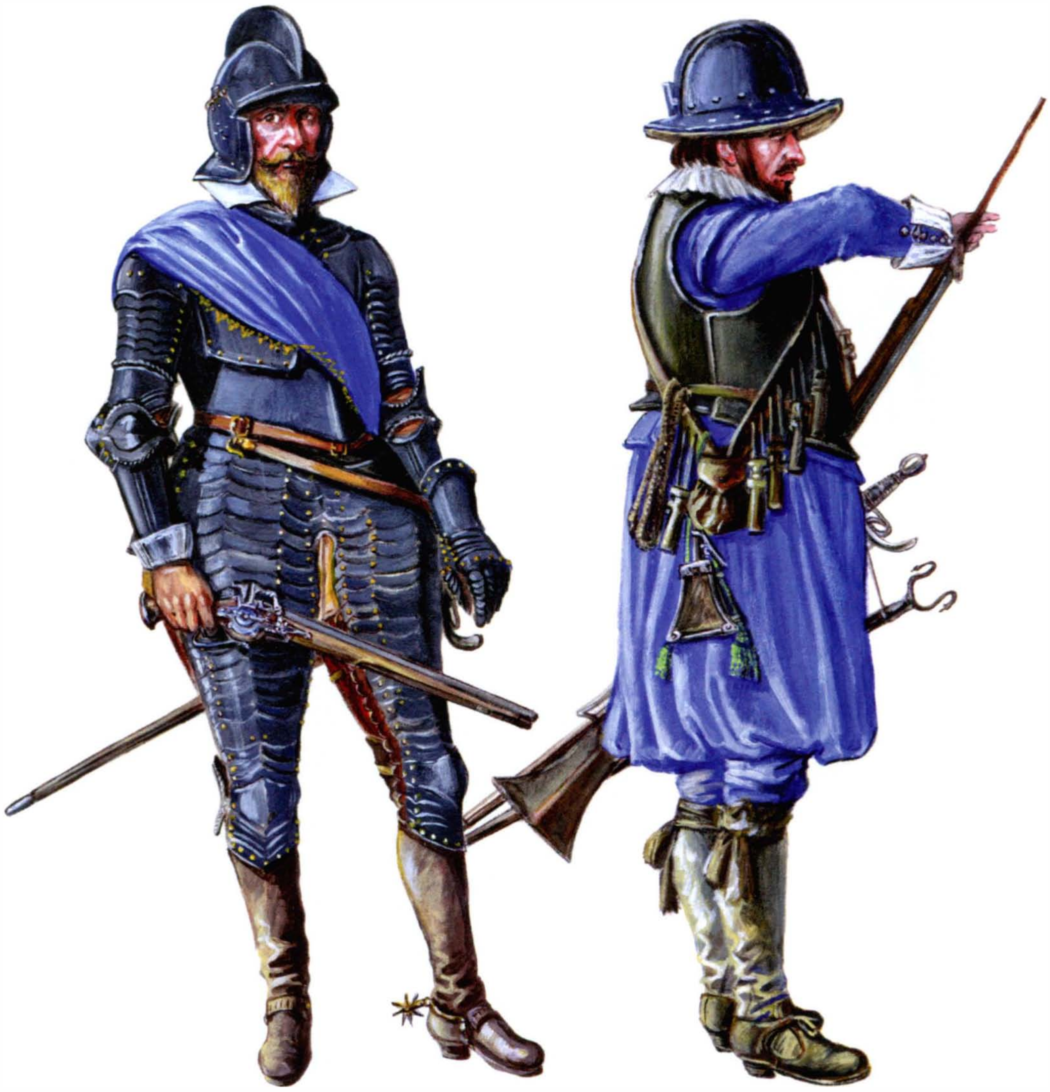
> His Majesty having ordered his Foot Army in the Fields, after his new order of Discipline of *Briggades*, then first brought in use, at which time his Majesty having showen unto my Colonell and his Officers, the Order of his Majesties discipline, in which Order, his Majestie commanded to put my Colonels Regiment.[58]

Since a brigade consisted of at least three battalions, each of which consisted of four companies, a brigade had an establishment strength of no less than 1,734 men, divided into 864 musketeers, 648 pikemen, and at least some 222 officers and under-officers (actually more, since there were additional officers in the regimental staff who would deploy with their men). Of the 864 musketeers, 576 served with the main formation while 288 were commanded musketeers. However, it must be remembered that on campaign, the number of men in any given unit in no way corresponded to its establishment strength. Sometimes more men were brought along in anticipation of losses, but far more common were understrength units, sometimes severely so. It was not unheard of for a unit to be at half-strength or less. Besides casualties,

---

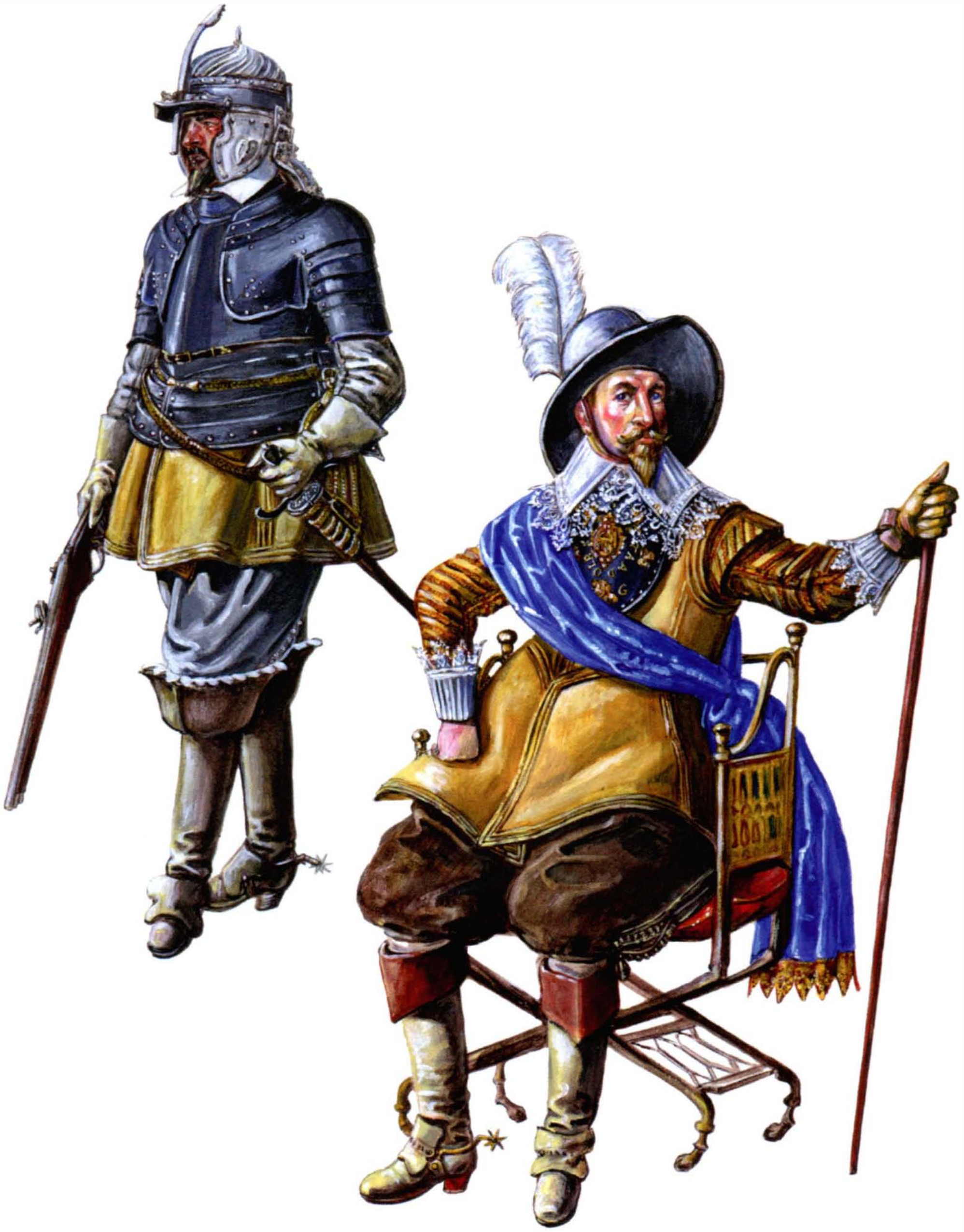
[58] Monro, *Monro His Expedition* vol. 2, p.2.

Plate 1



The Swedish army at home, 1618
Left: Cuirassier, retinue of nobles
Right: Musketeer, Östergötland territorial regiment
(Illustration by Sergey Shamenkov, © Helion & Company 2020)
See Colour Plate Commentaries for further information.

Plate 2



The Swedish army in Livonia, 1621–1626

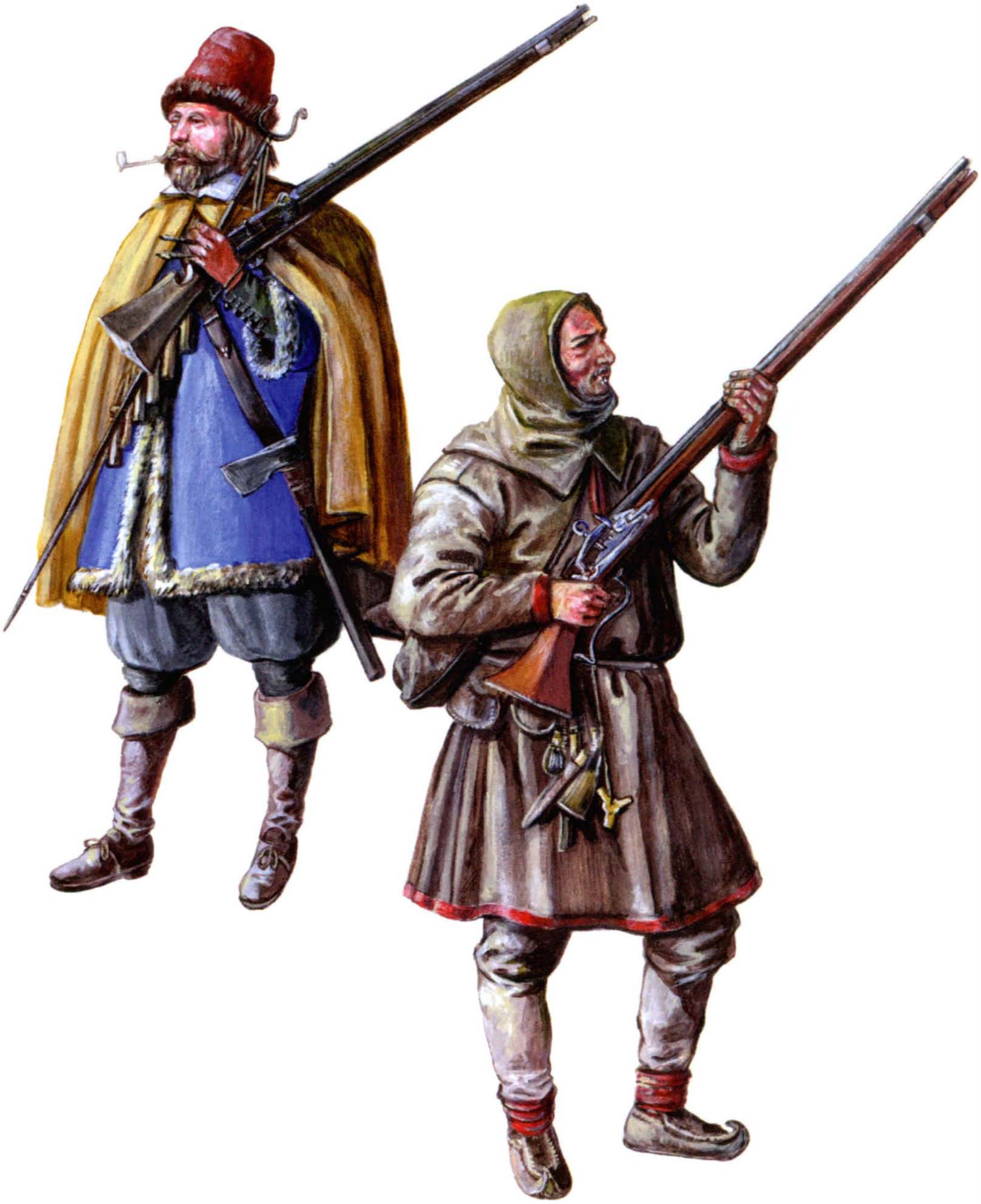
Left: Finnish armoured cavalryman, Colonel Åke Tott's Finnish Cavalry

Right: Gustavus Adolphus in siege armour

(Illustration by Sergey Shamenkov, © Helion & Company 2020)

See Colour Plate Commentaries for further information.

Plate 3



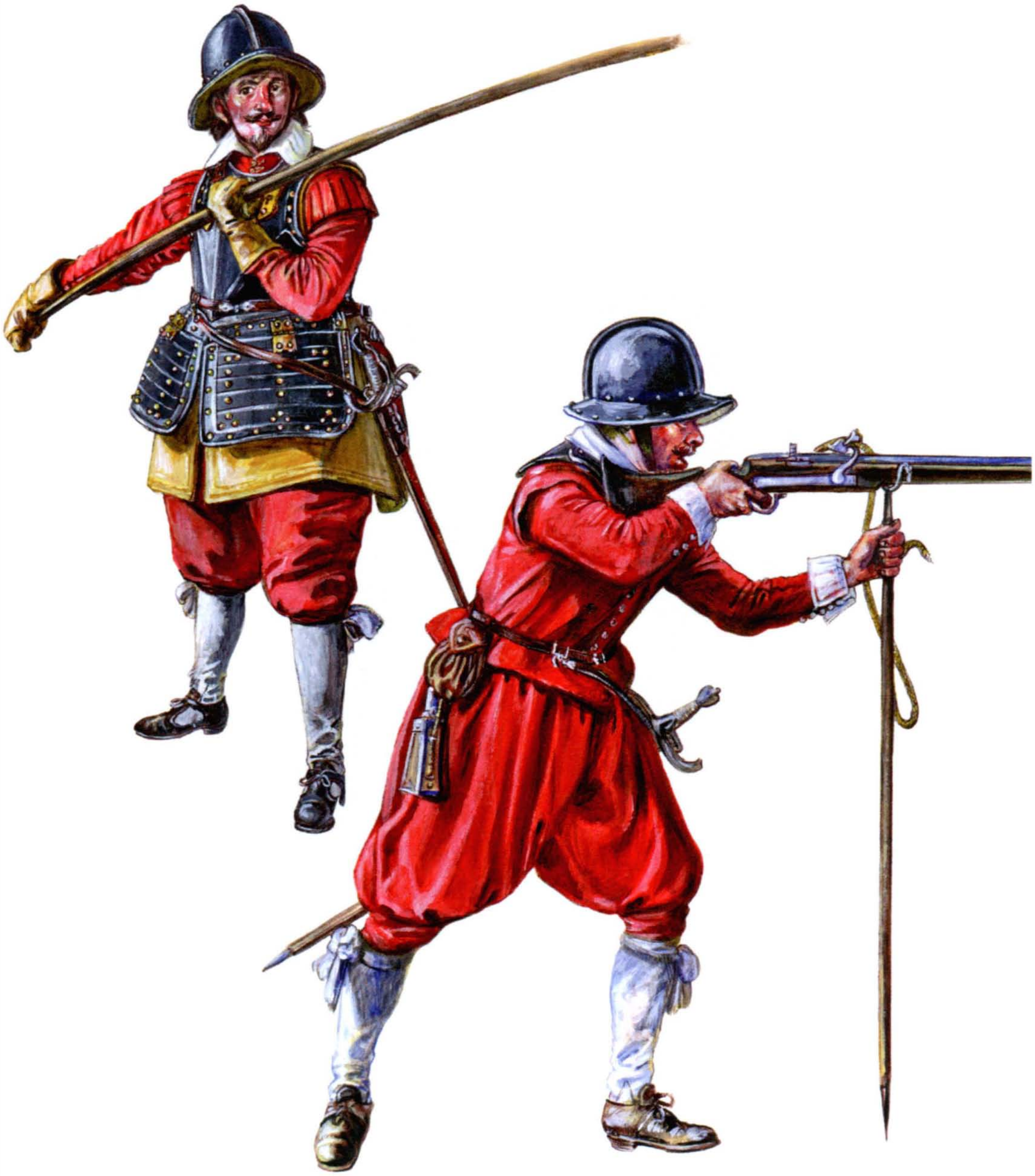
The Swedish army in Livonia, 1621–1626

Left: Musketeer in winter clothes

Right: Lapp musketeer

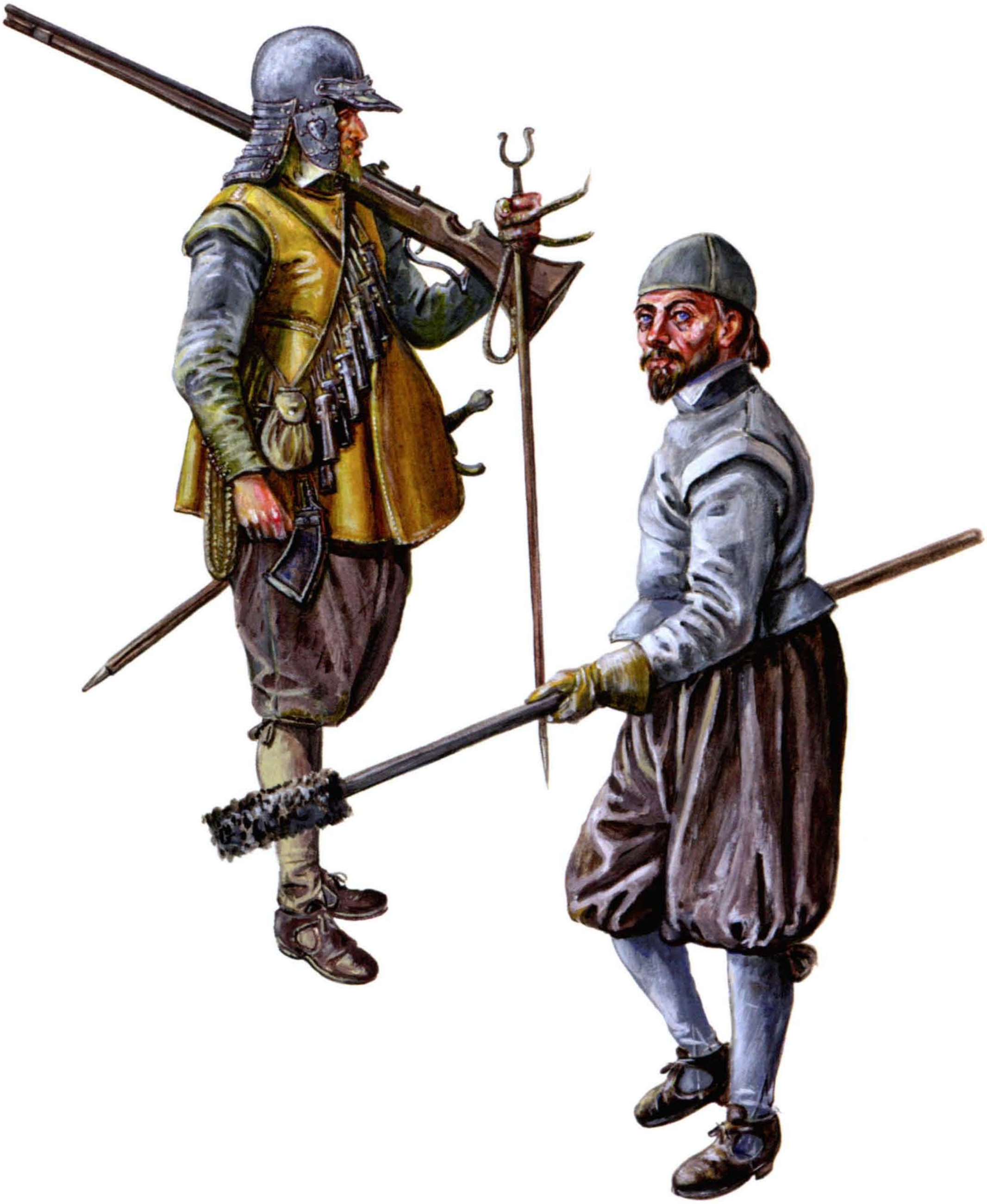
(Illustration by Sergey Shamenkov, © Helion & Company 2020)

See Colour Plate Commentaries for further information.



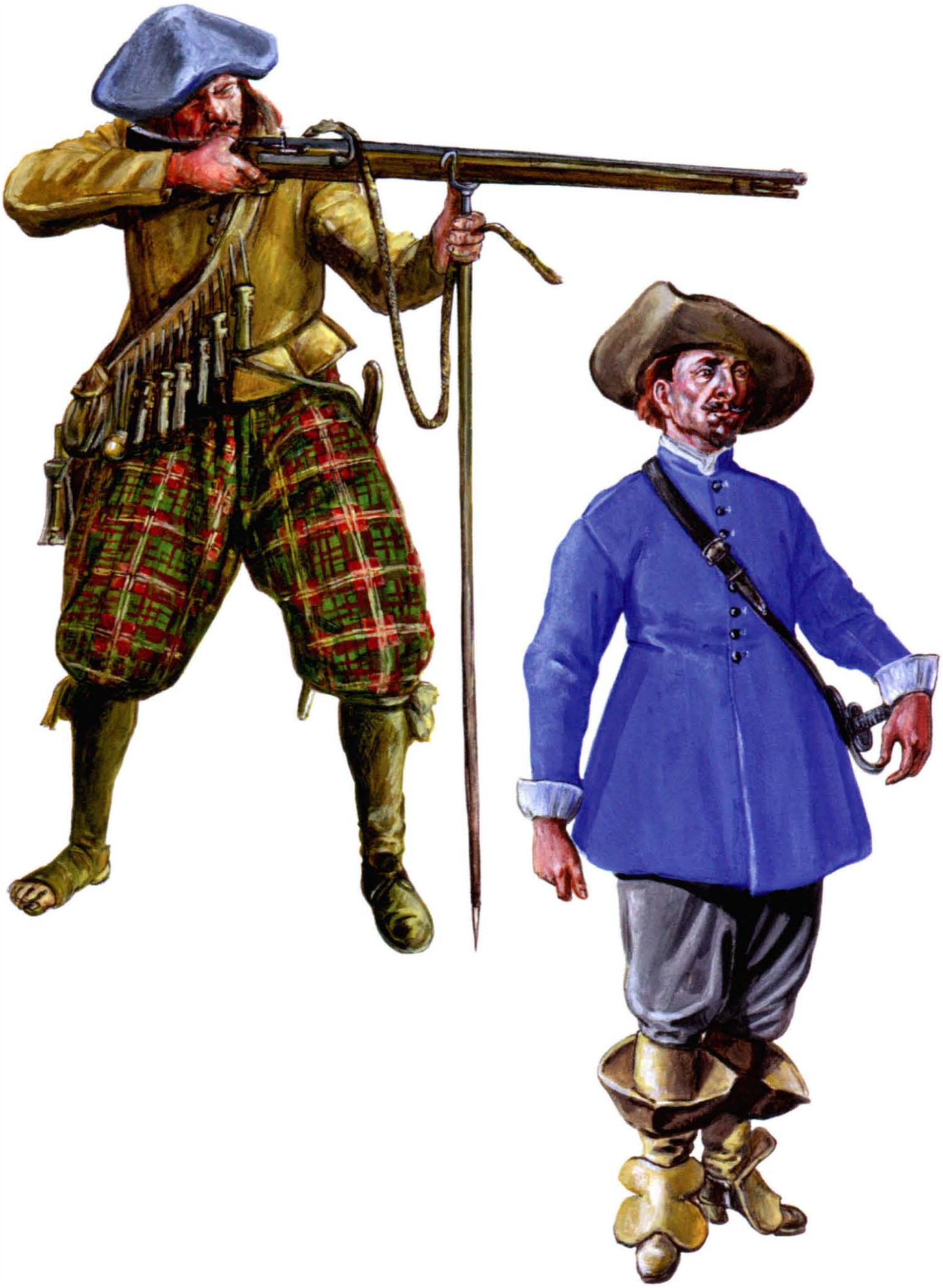
The Swedish army in Prussia, 1626–1629
Left: Pikeman, Norrland territorial regiment
Right: Musketeer, Norrland territorial regiment
(Illustration by Sergey Shamenkov, © Helion & Company 2020)
See Colour Plate Commentaries for further information.

Plate 5



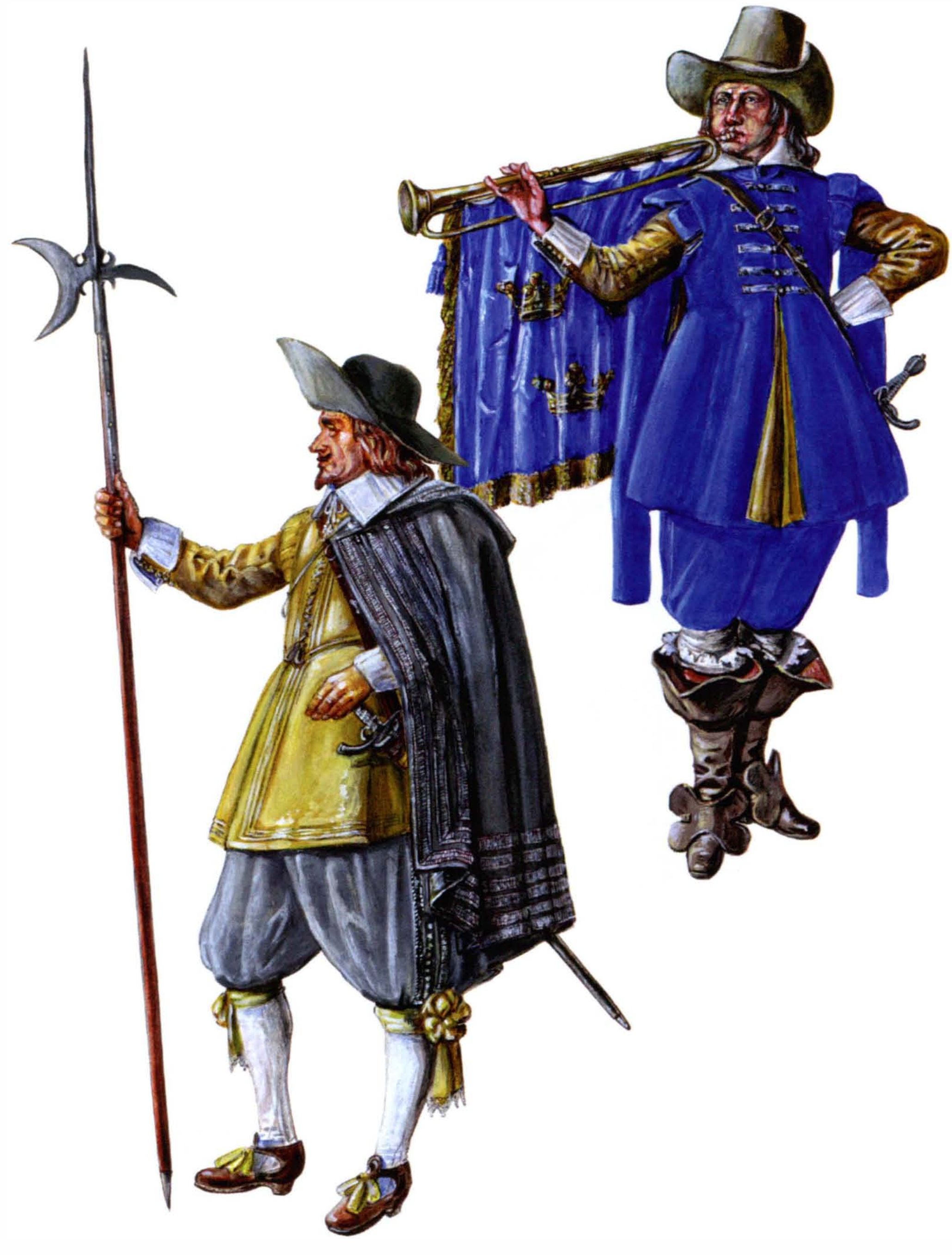
The Swedish army in Pomerania, 1630
Left: Veteran musketeer
Right: Artilleryman
(Illustration by Sergey Shamenkov, © Helion & Company 2020)
See Colour Plate Commentaries for further information.

Plate 6



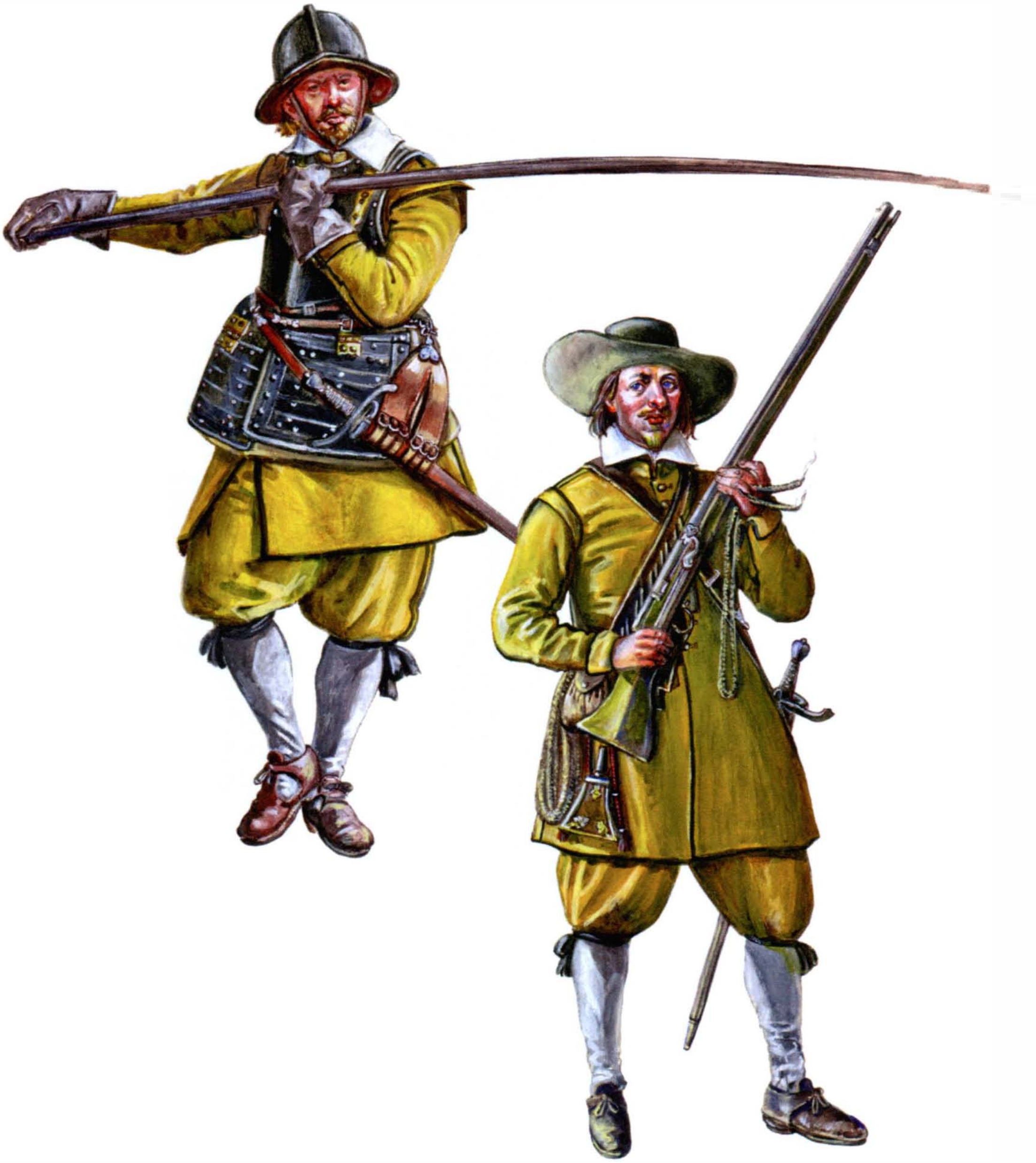
The Swedish army at Breitenfeld, 1631
Left: Musketeer, Colonel Robert Monro's Scottish Regiment
Right: Cavalryman, Västgöta Cavalry Regiment
(Illustration by Sergey Shamenkov, © Helion & Company 2020)
See Colour Plate Commentaries for further information.

Plate 7



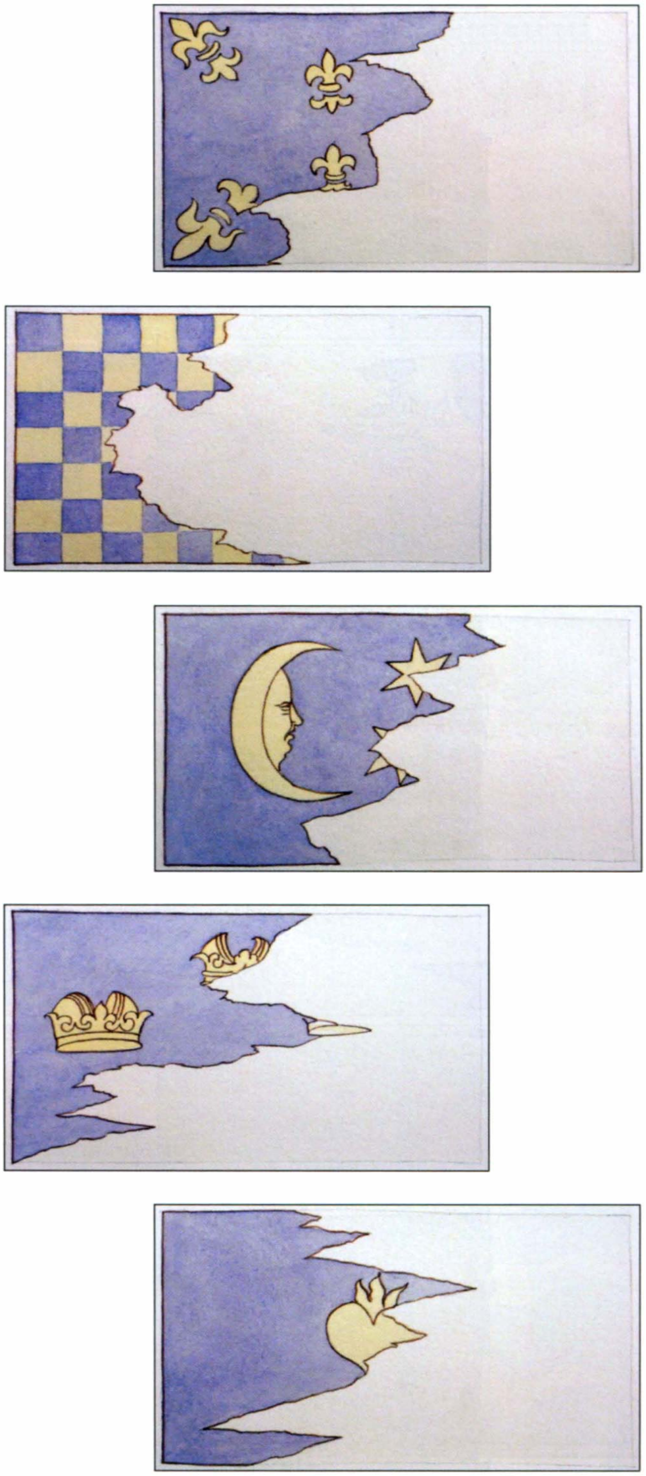
The Swedish army at Lützen, 1632
Left: Pikeman on ceremonial duty, Drabant Guard
Right: Cavalry trumpeter
(Illustration by Sergey Shamenkov, © Helion & Company 2020)
See Colour Plate Commentaries for further information.

Plate 8



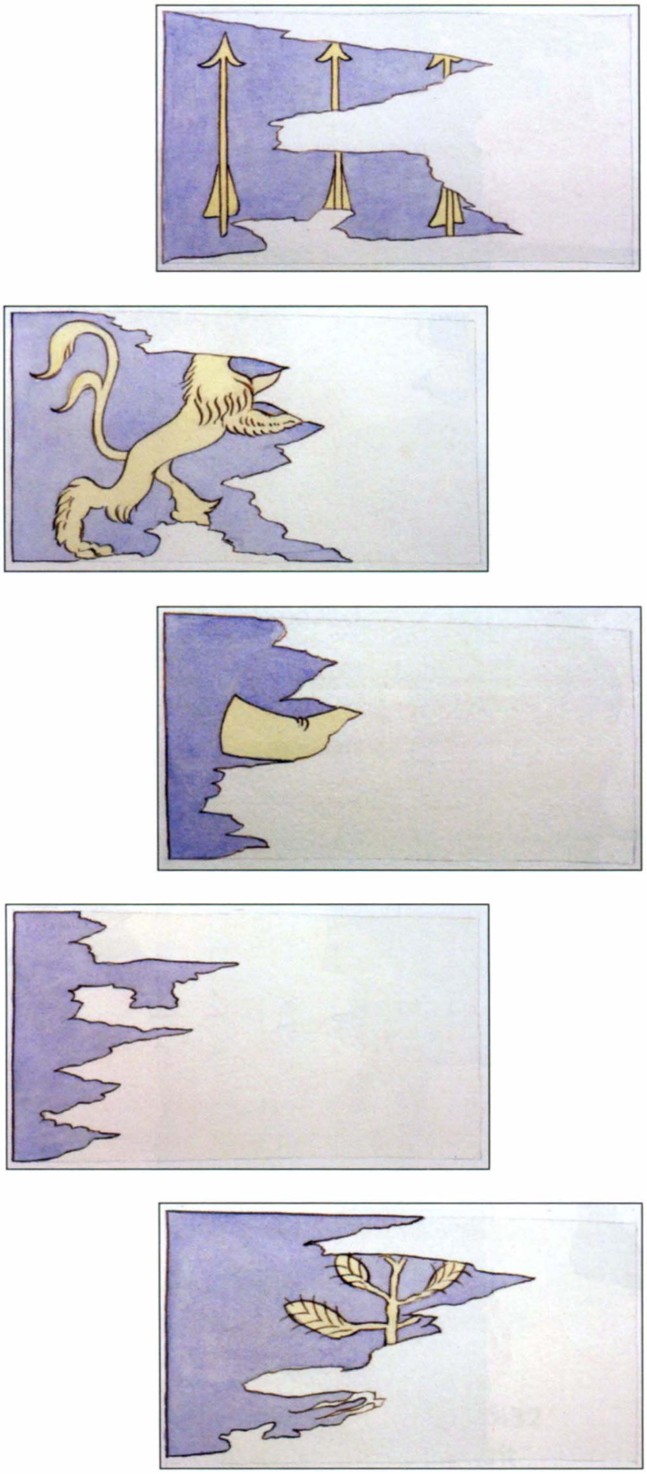
The Swedish army at Lützen, 1632
Left: Pikeman, Yellow Regiment
Right: Musketeer, Yellow Regiment
(Illustration by Sergey Shamenkov, © Helion & Company 2020)
See Colour Plate Commentaries for further information.

Plate 9



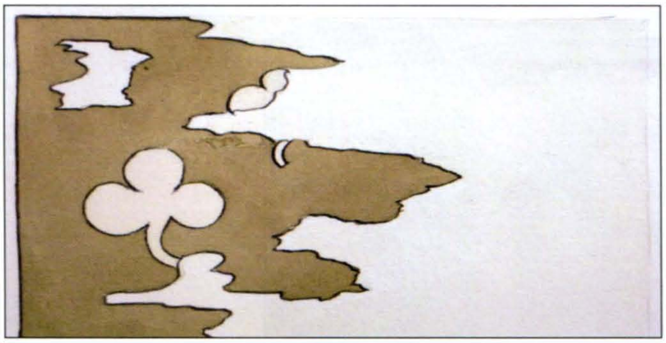
The Blue Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 10

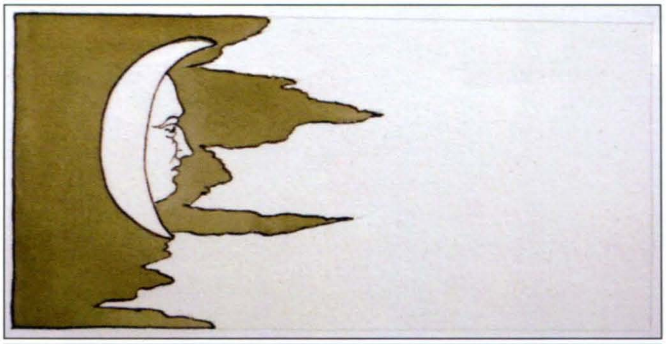


The Blue Regiment of Foot (continued)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

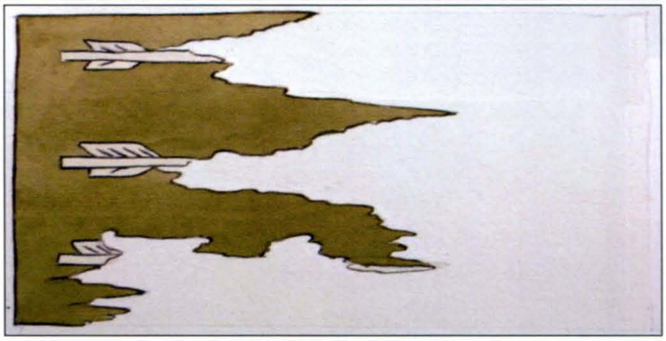
Plate 11



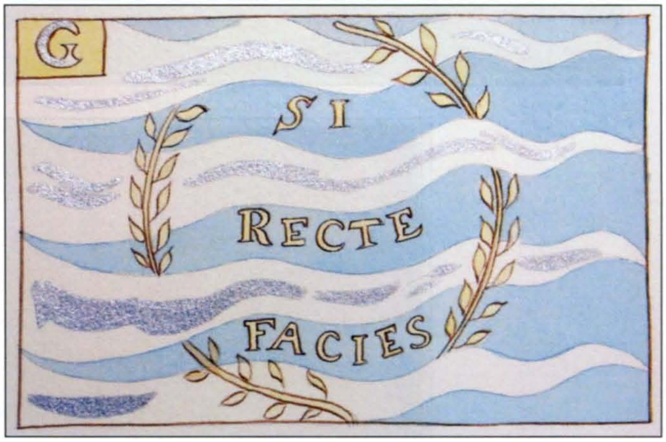
11.1



11.2



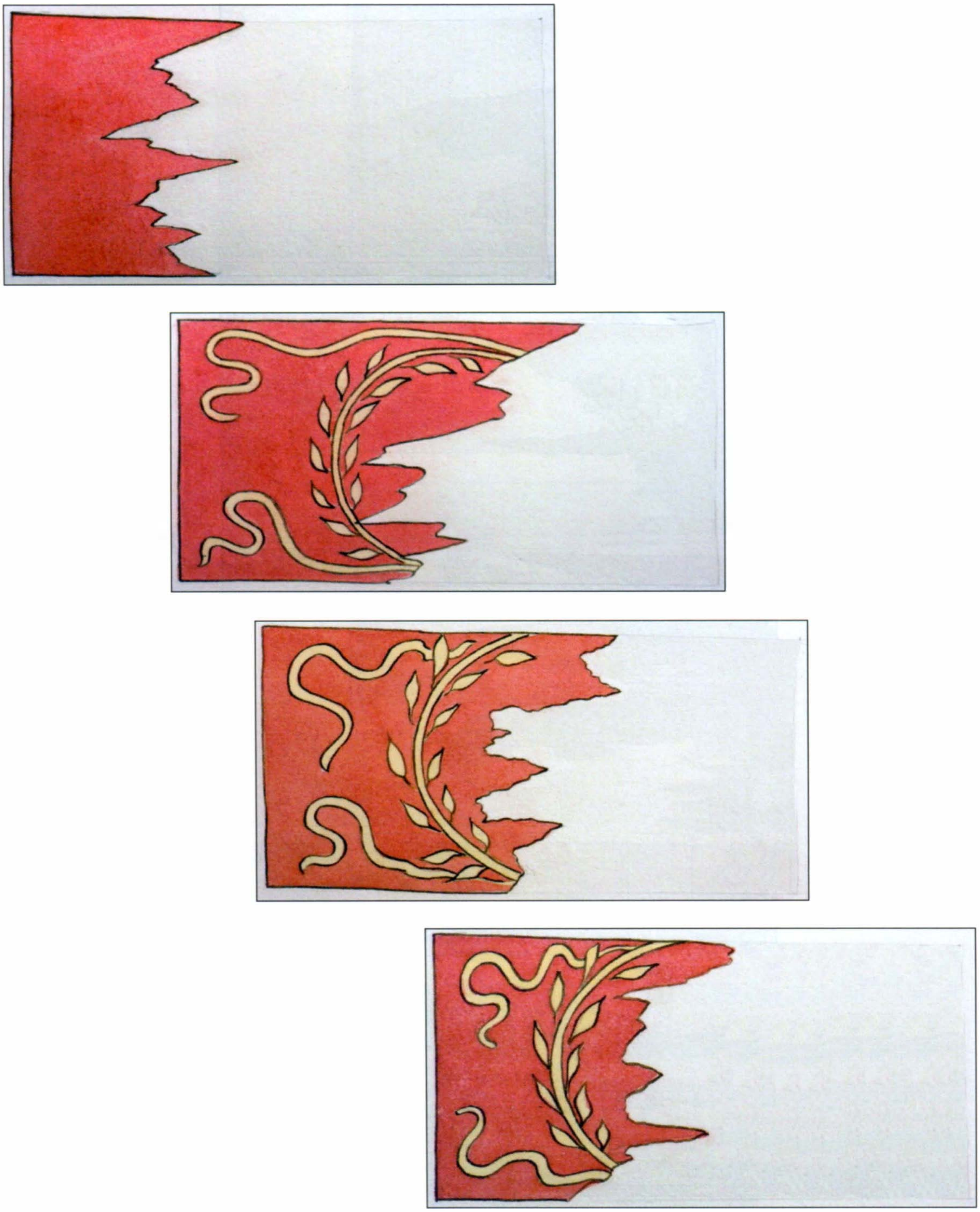
11.3



11.4

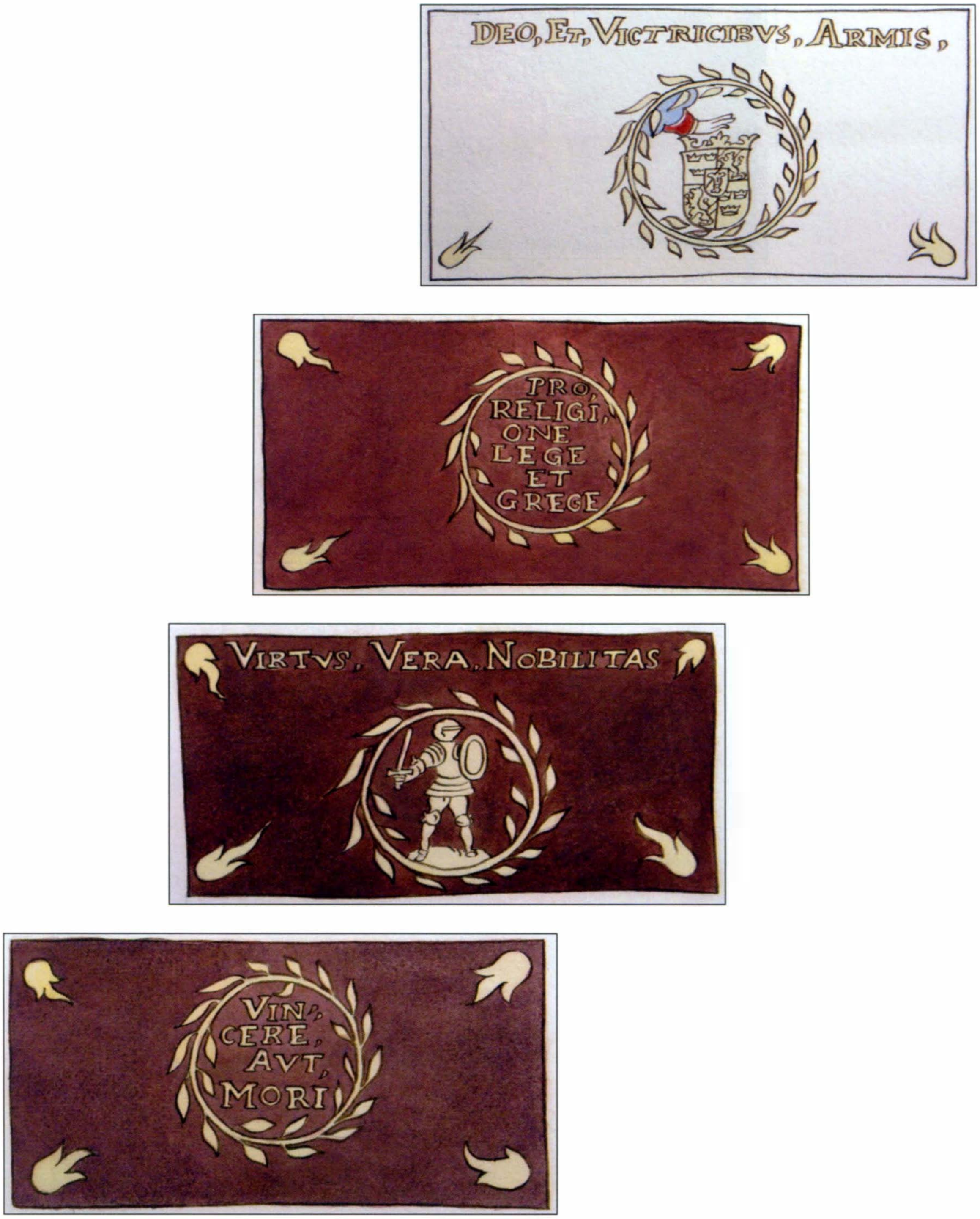
Green Regiment of Foot (11.1, 11.2, 11.3);
Christoph von Houwald's Regiment of Foot (11.4)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 12



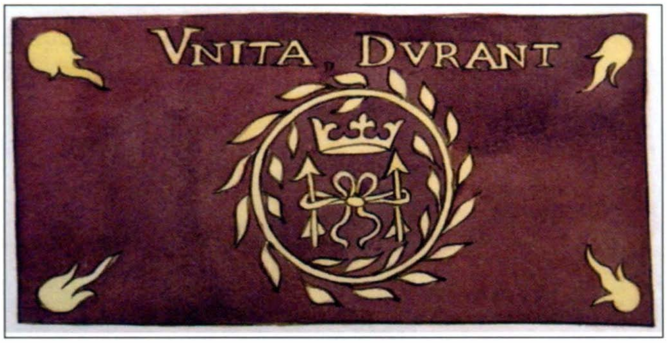
The Orange Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

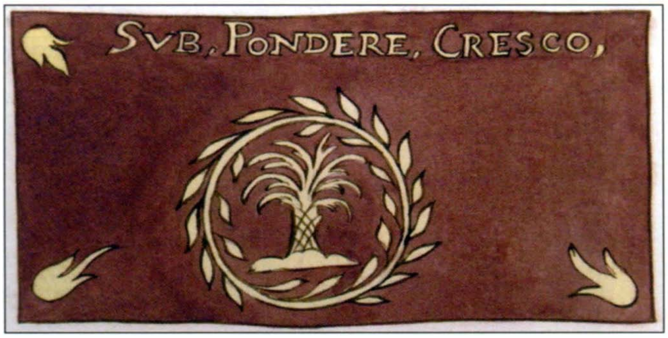
Plate 13

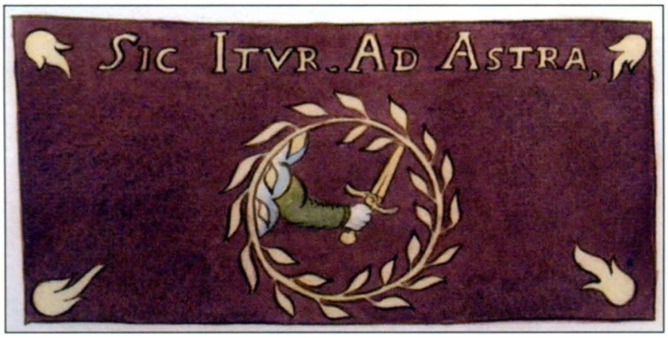

DEO, ET, VICTRICIBVS, ARMIS,
PRO, RELIGI, ONE LEGE ET GREGE
VIRTVS, VERA, NOBILITAS
VIN, CERE, AVT, MORI

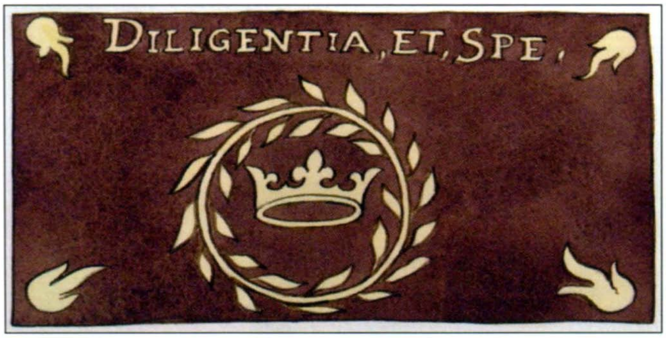
General Johan Banér's Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 14


VNITA, DVRANT


SVB, PONDERE, CRESCO,

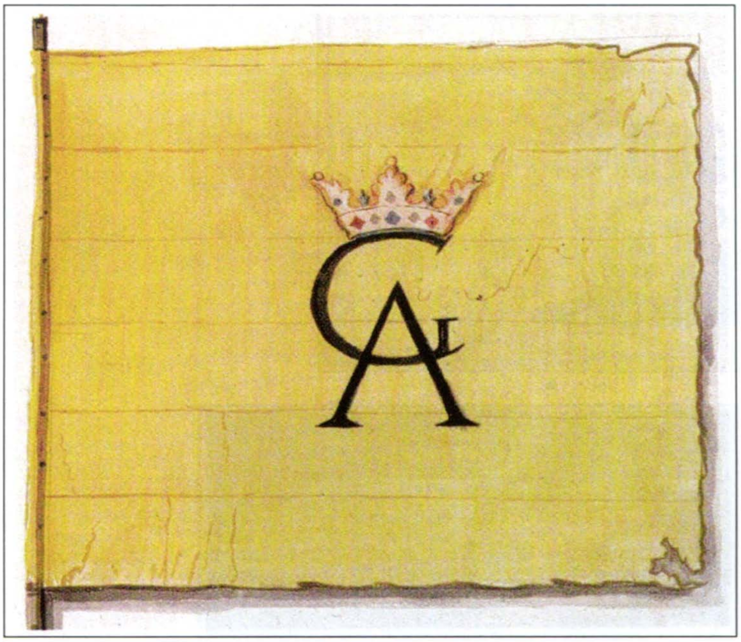

SIC ITVR. AD ASTRA,


DILIGENTIA, ET, SPE,

General Johan Banér's Regiment of Foot (continued)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

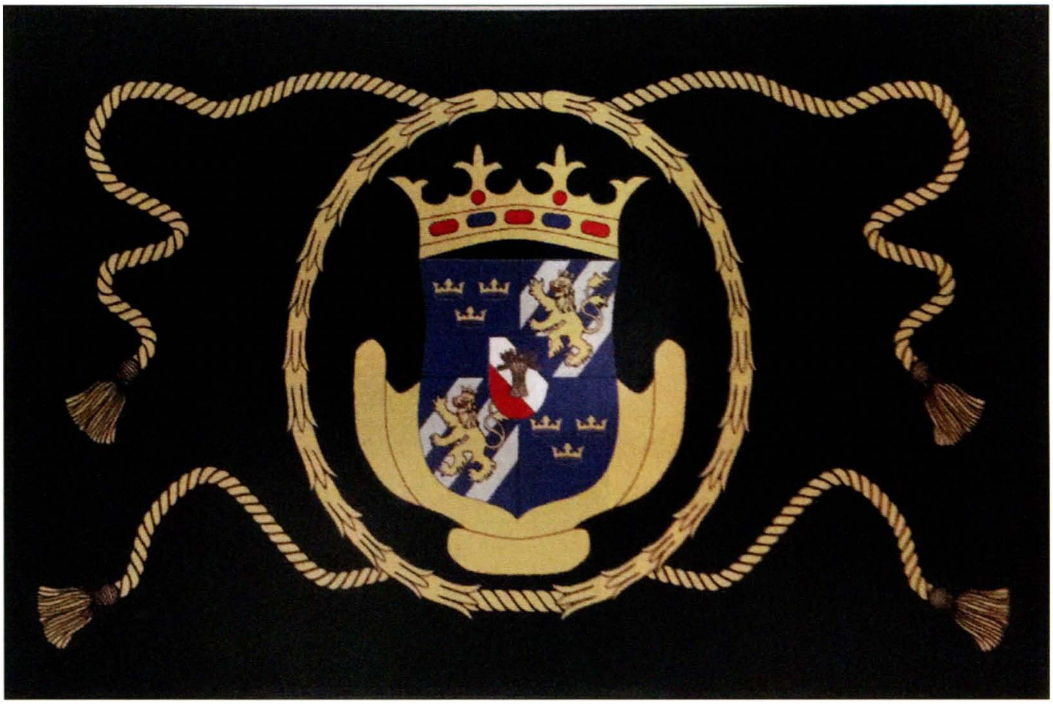
Plate 15

15.1



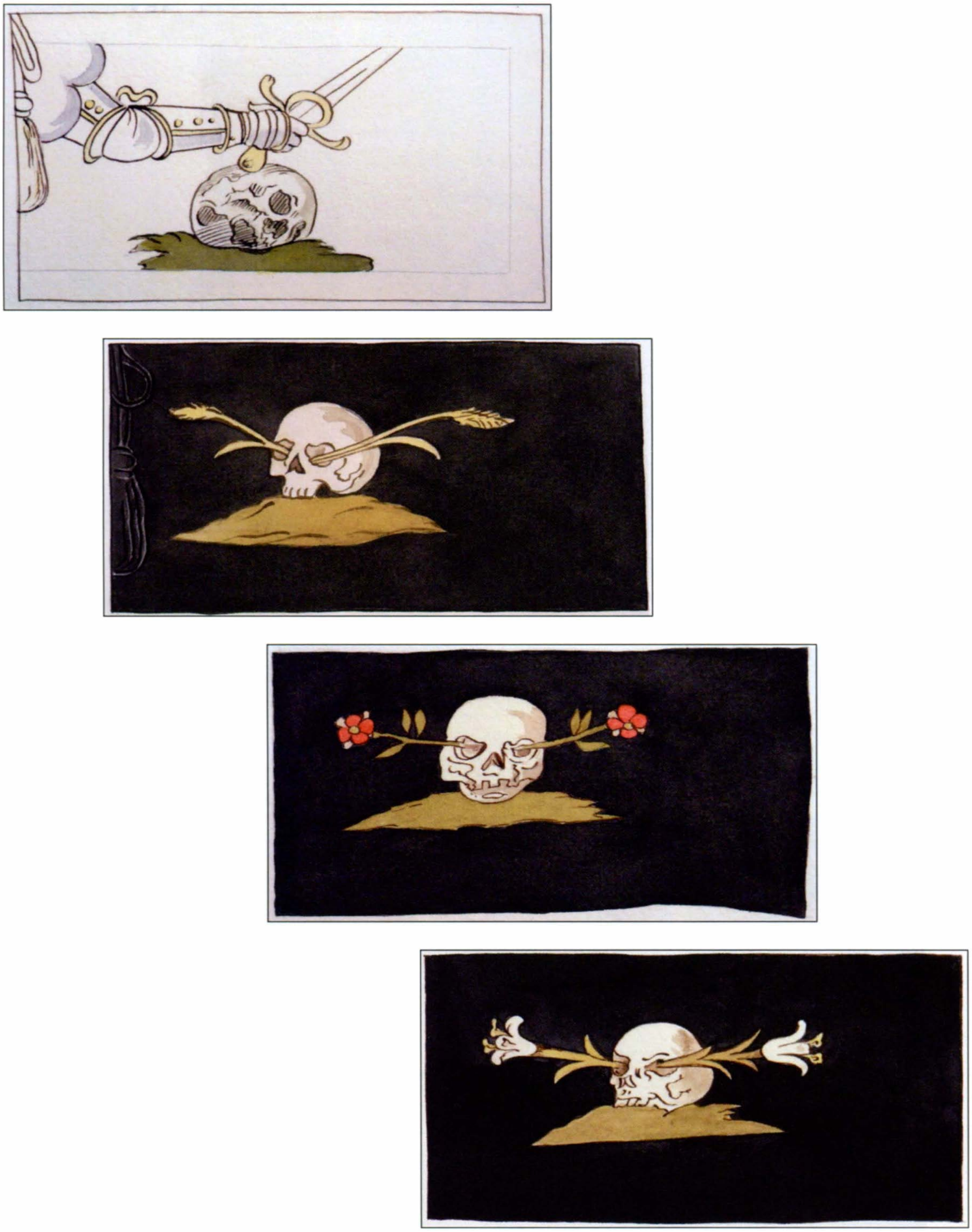
Infantry company colour, *c.* 1615
(Riksarkivet, Stockholm. Photo: Medströms)

15.2



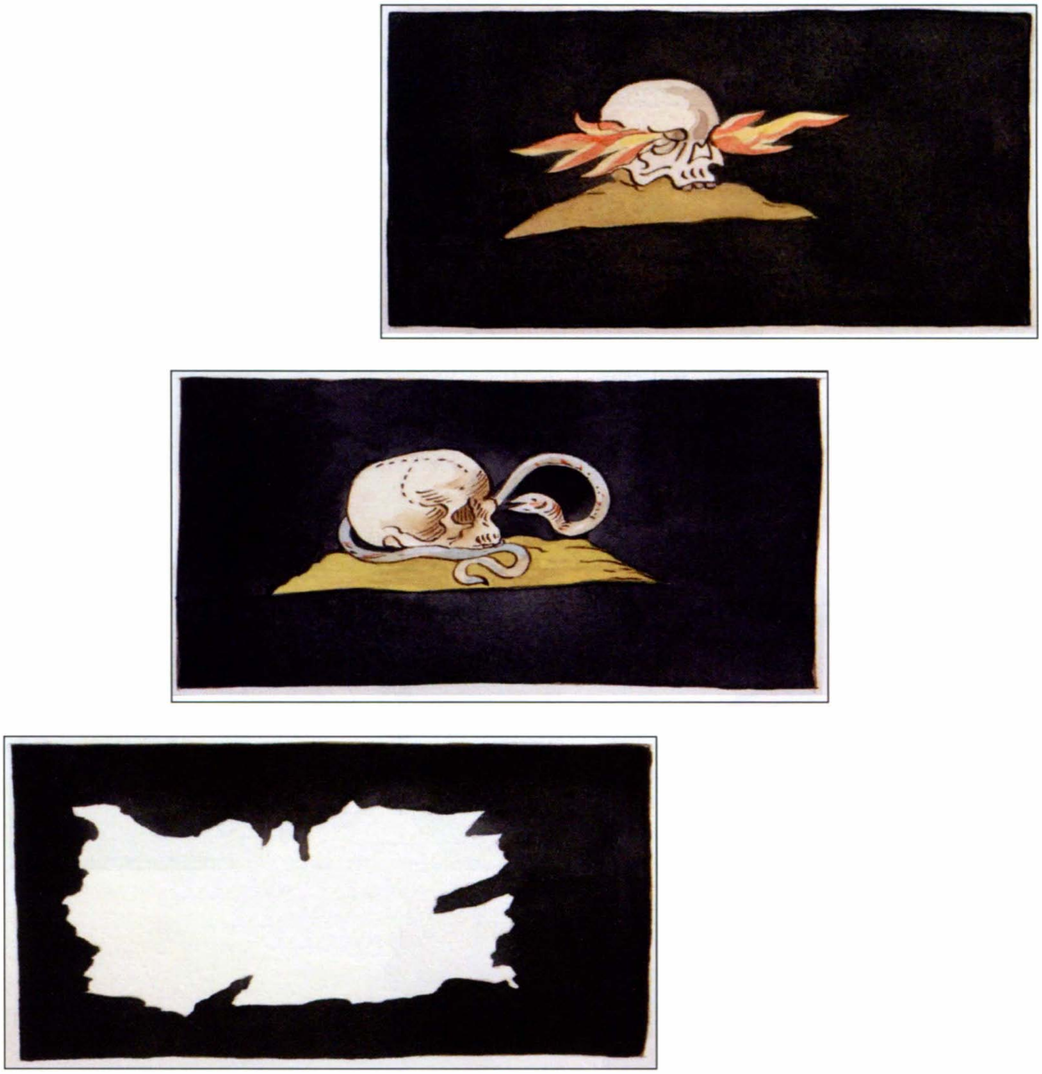
His Royal Majesty's Lifeguard Company colour (Photo: Medströms)
See Colour Plate Commentaries for further information.

Plate 16



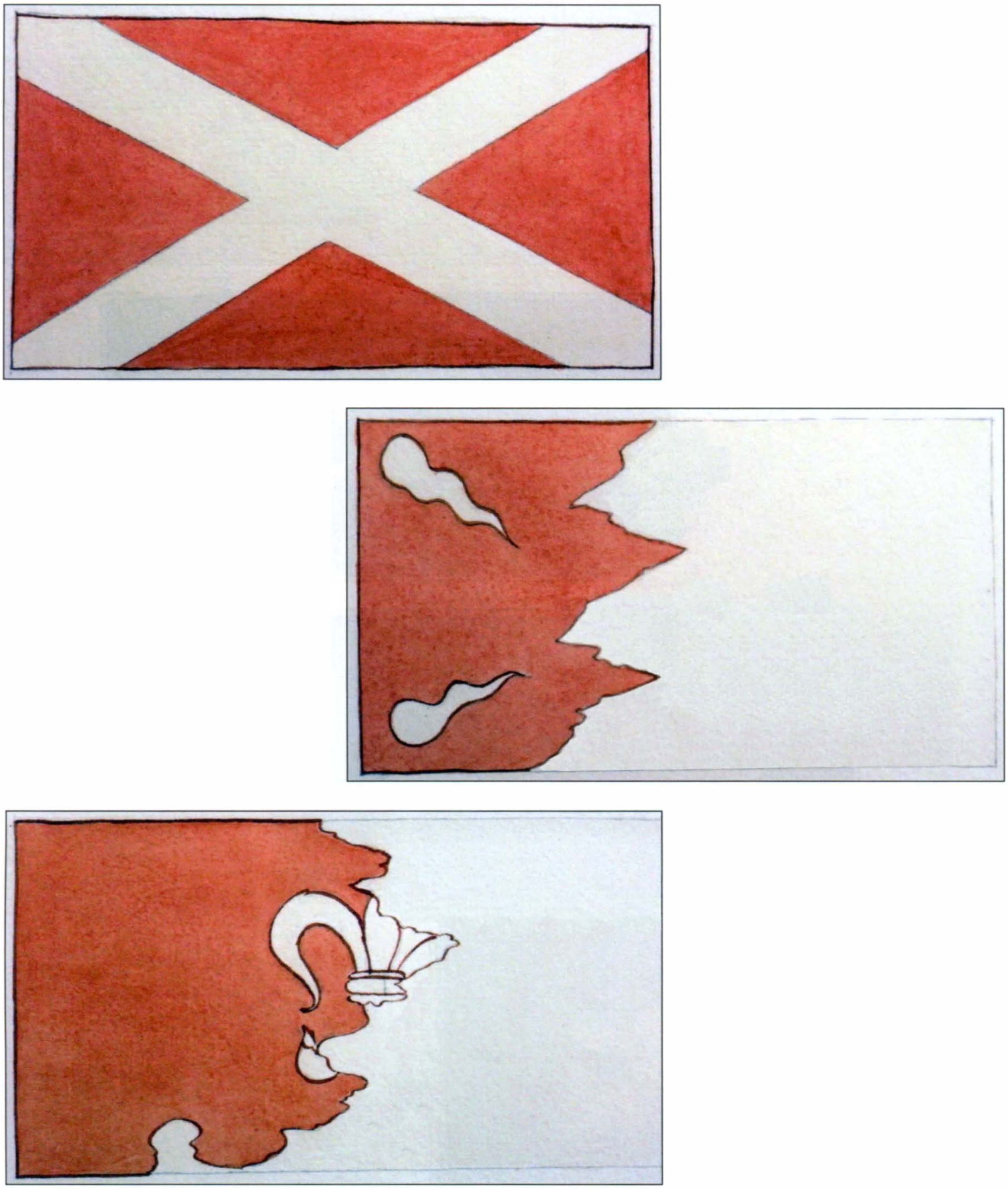
Åke Tott's Cavalry Regiment
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 17

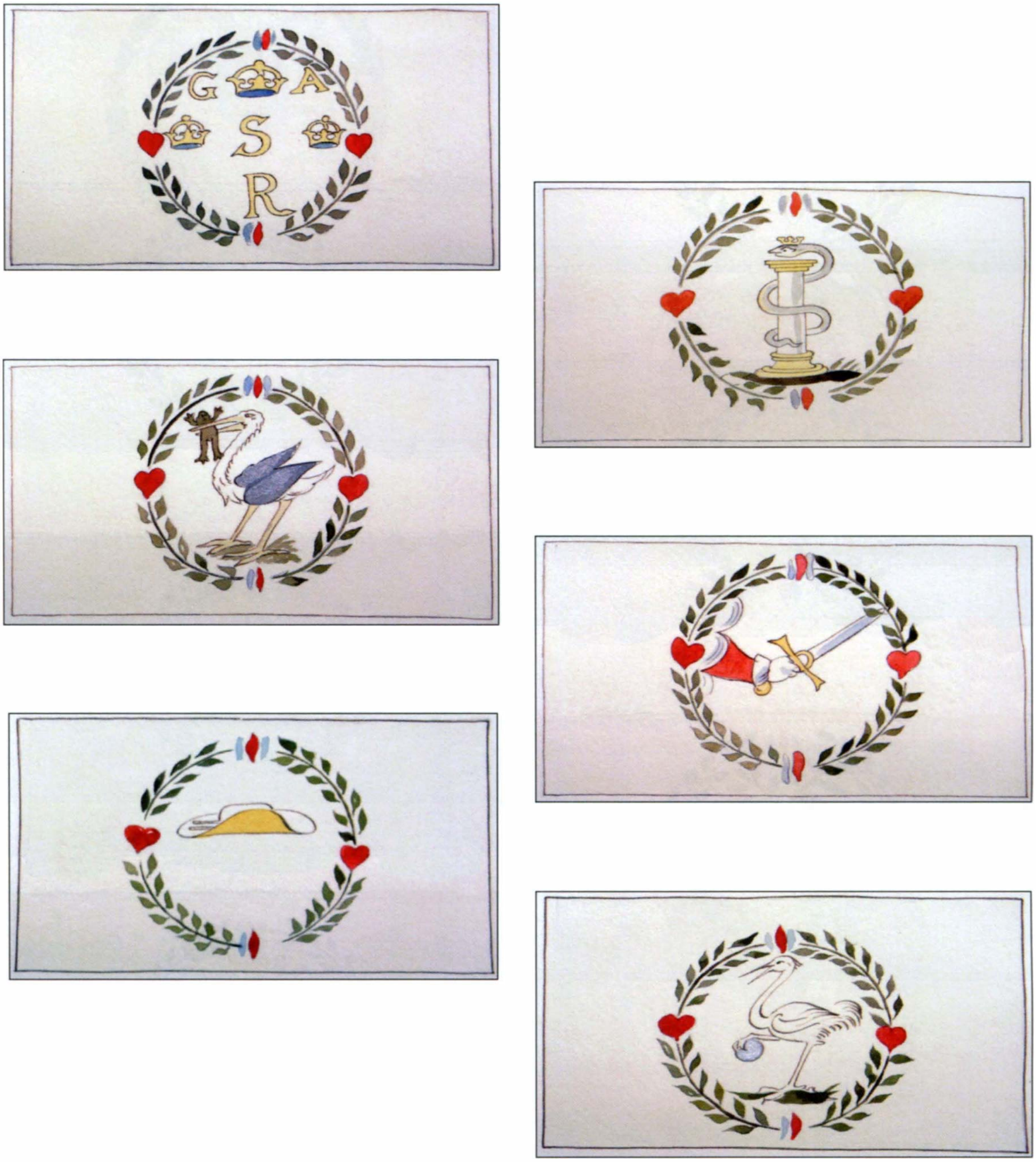


Åke Tott's Cavalry Regiment (continued)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 18

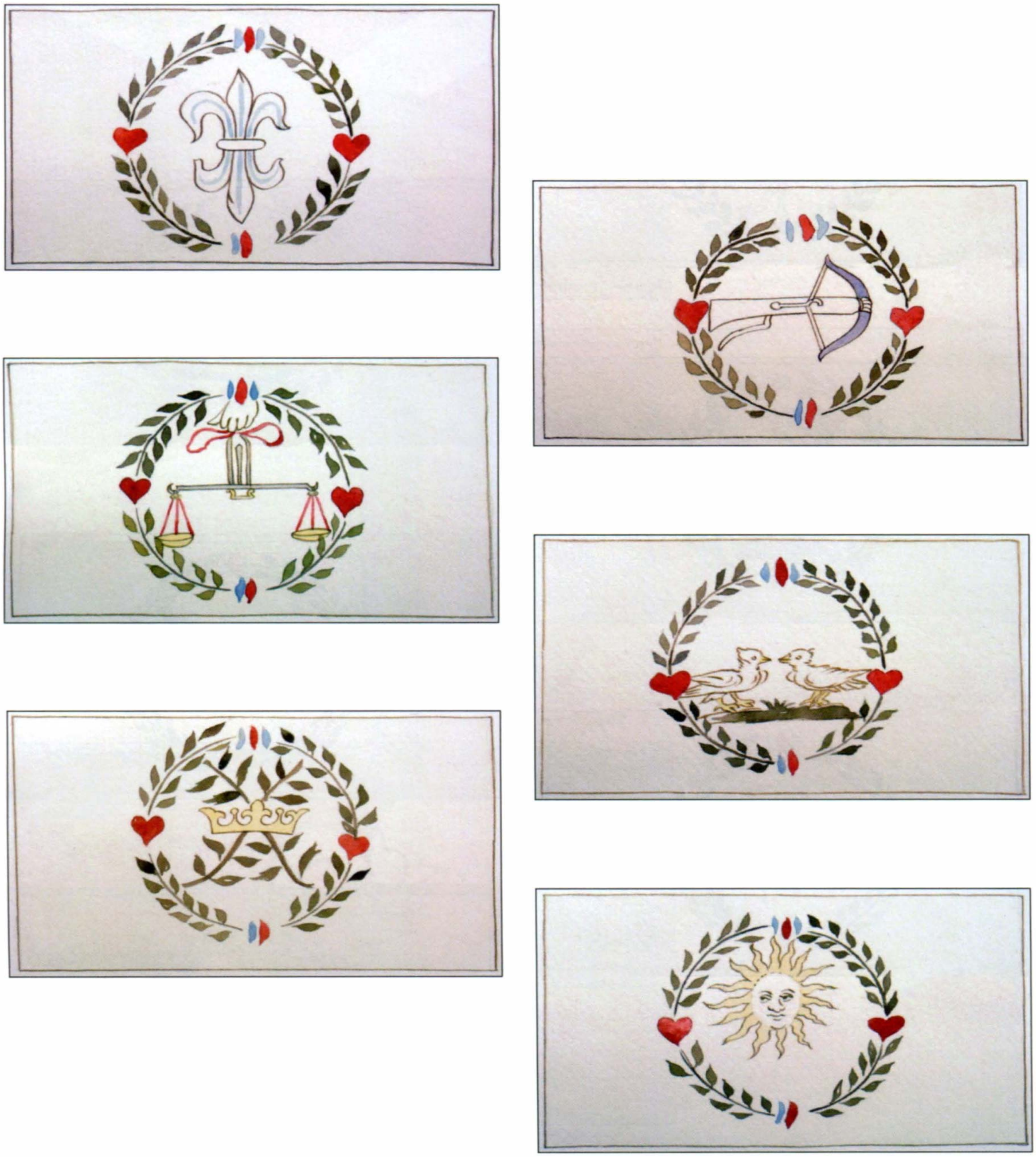


The Red Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.



Major General Balthasar Jacob von Schlammersdorff's 'Old' Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

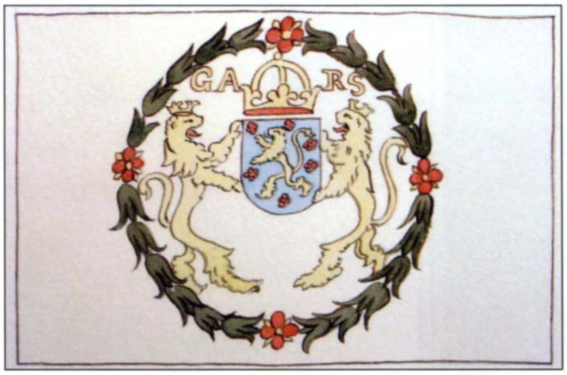
Plate 20

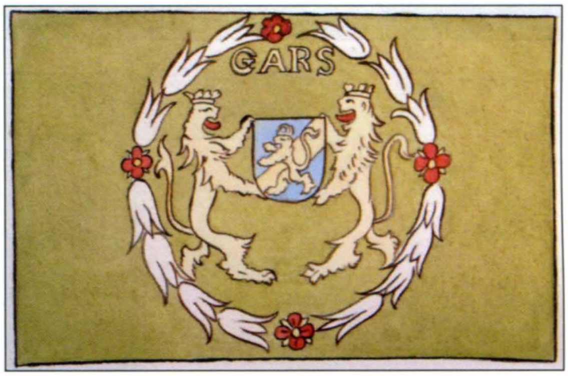


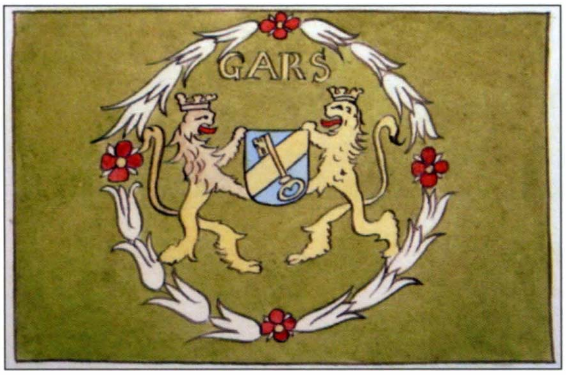
Major General Balthasar Jacob von Schlammersdorff's 'Old' Regiment of Foot (continued) (Riksarkivet, Stockholm. Author's photos)

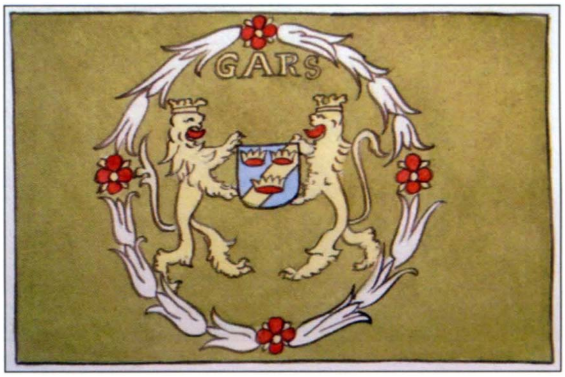
See Colour Plate Commentaries for further information.

Plate 21



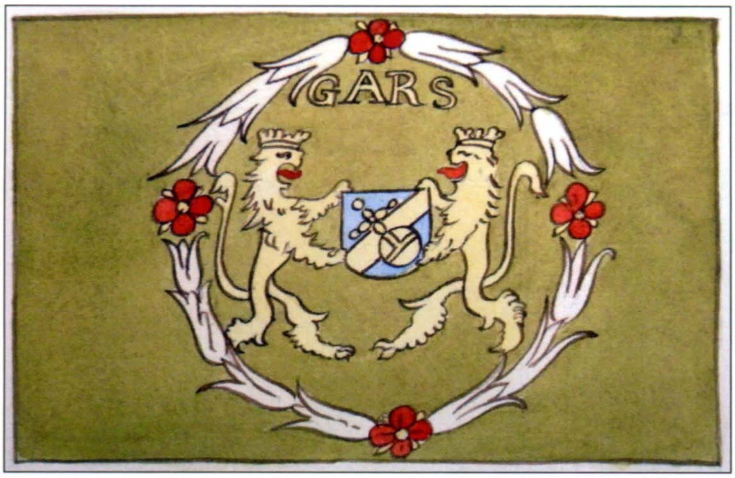


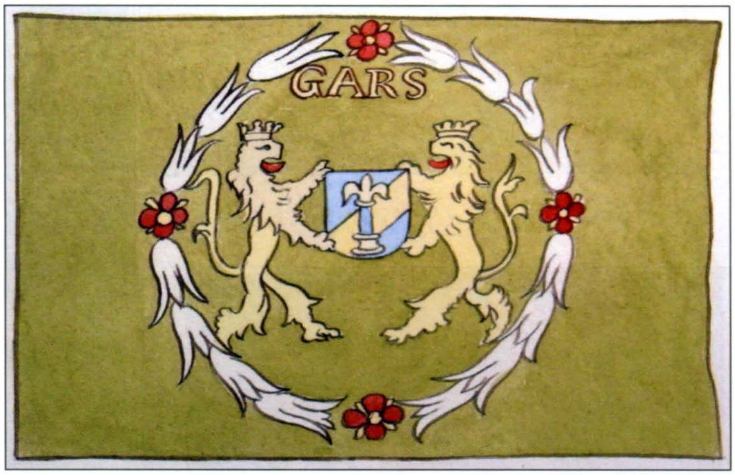


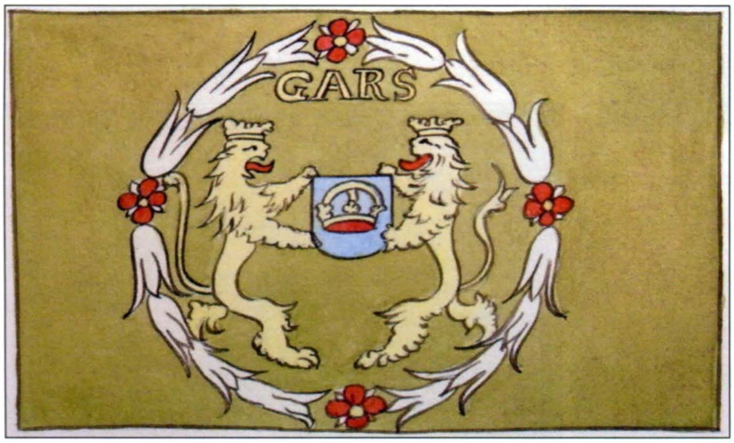


Colonel Monro's (Mackay's) Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 22

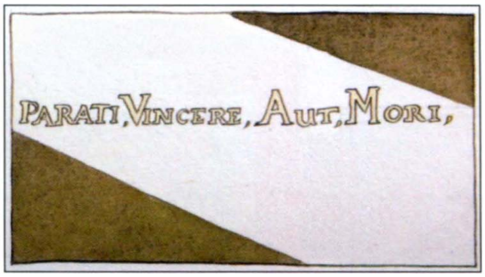


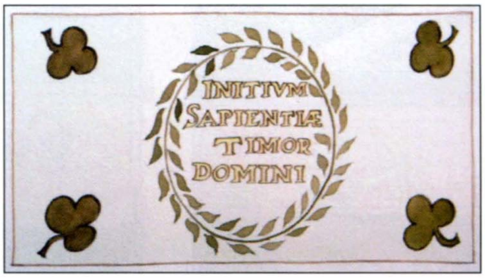


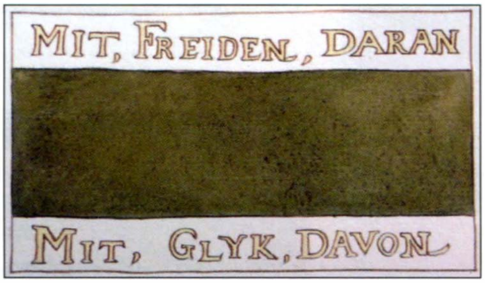


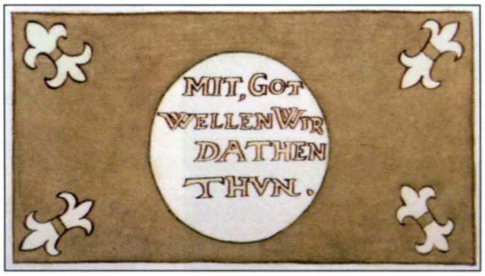
Colonel Monro's (Mackay's) Regiment of Foot (continued)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

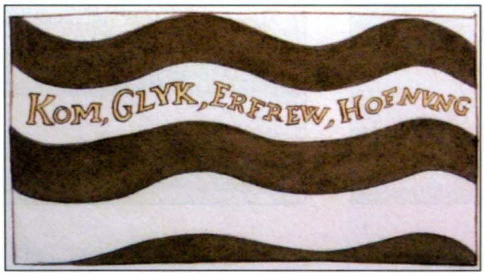
Plate 23


PARATI, VINCERE, AUT, MORI,


INITIVM
SAPIENTIÆ
TIMOR
DOMINI


MIT, FREIDEN, DARAN
MIT, GLYK, DAVON

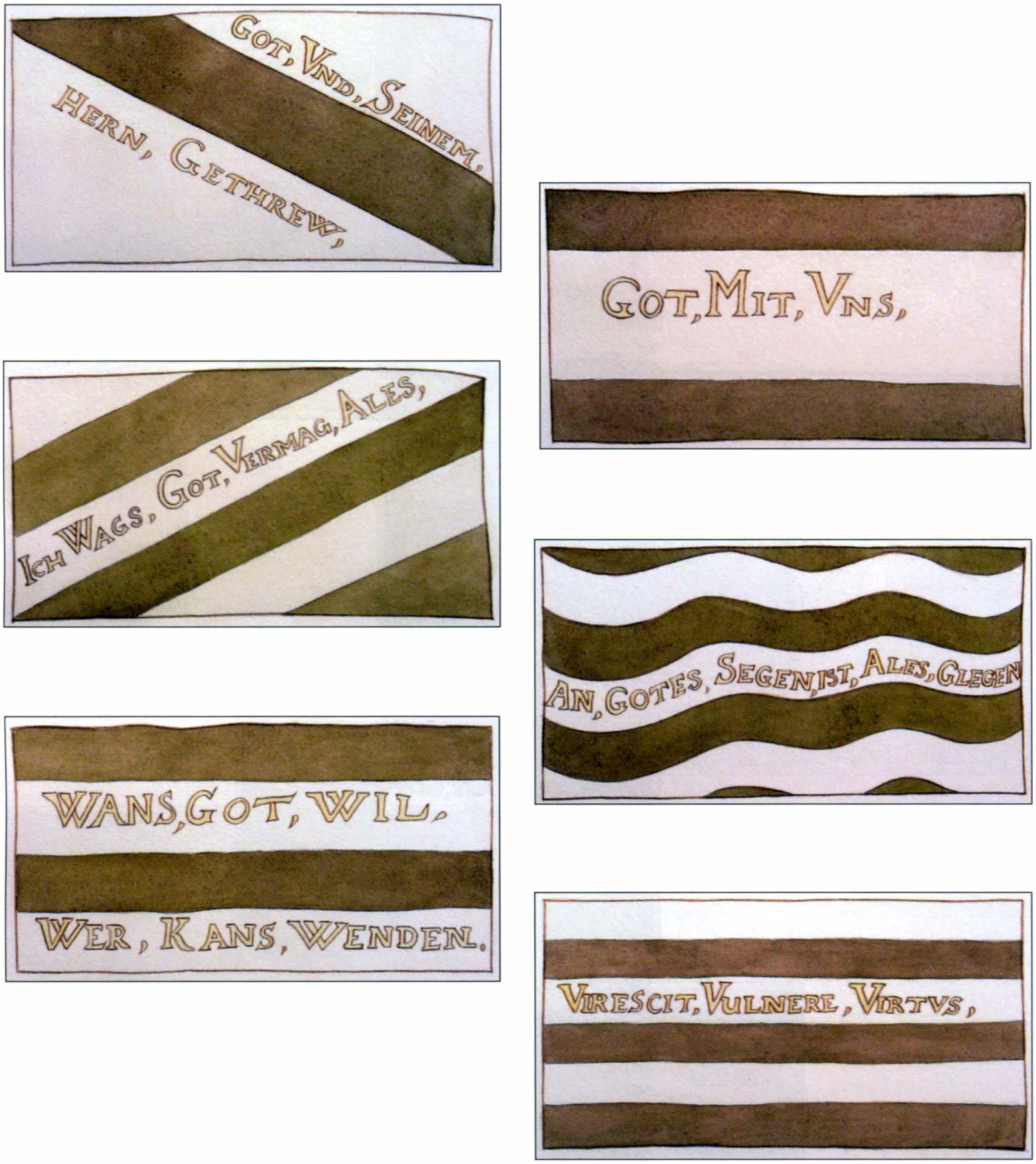

MIT, GOT
WELLEN WIR
DATHEN
THVN.


KOM, GLYK, ERFREW, HOFNVNG

Colonel Thomas Sigmund von Schlammersdorff's 'Old' Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)

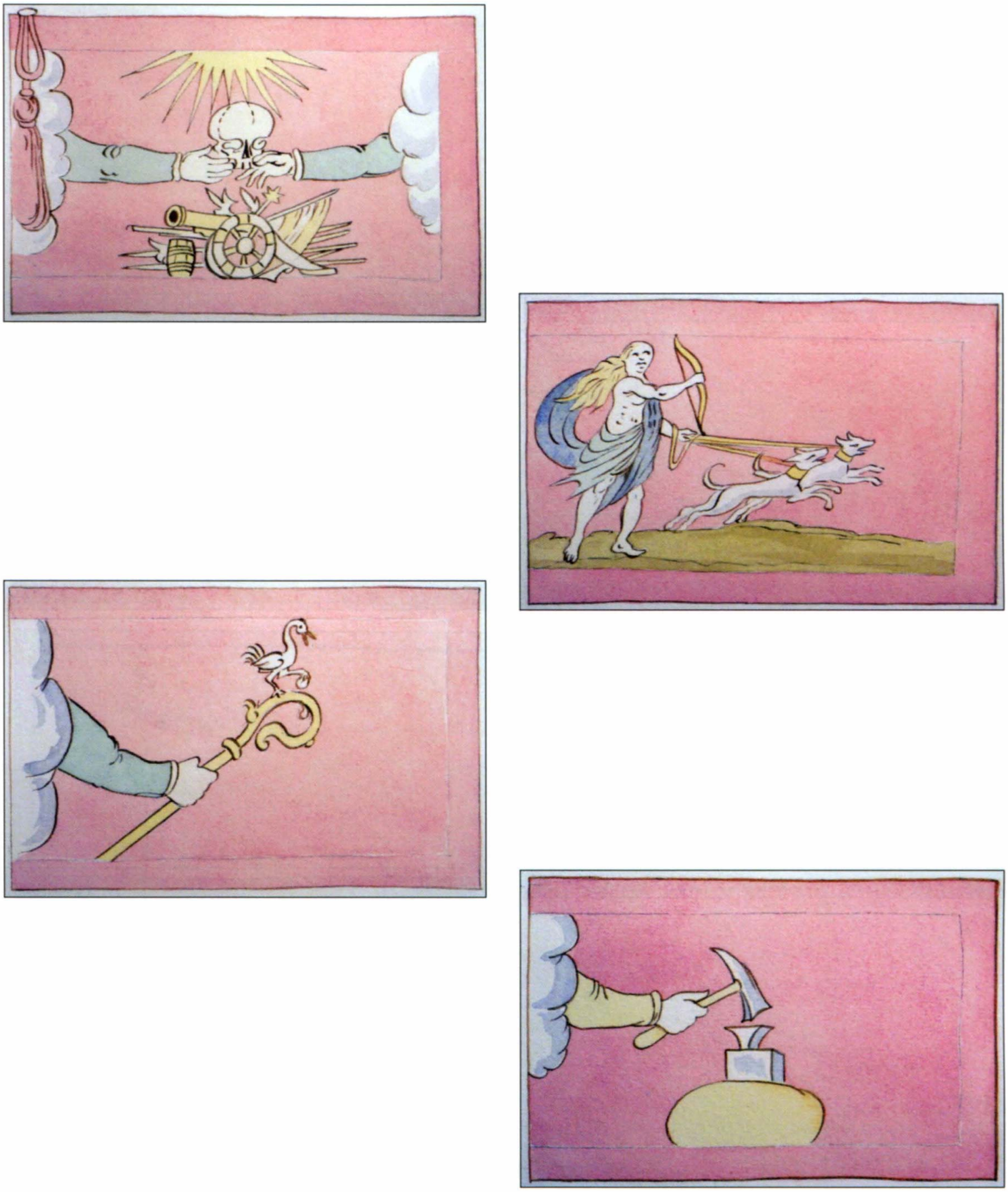
See Colour Plate Commentaries for further information.

Plate 24

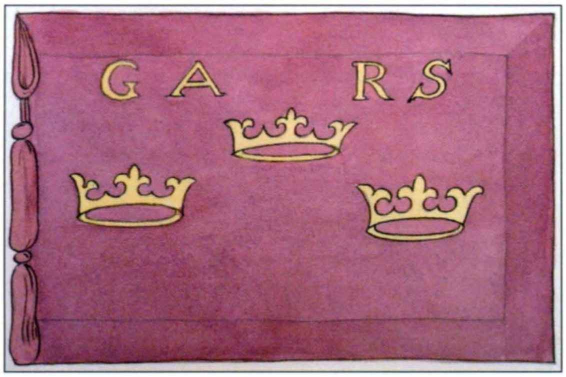

Got, Vnd, Seinem,
Hern, Gethrew,
Got, Mit, Vns,
Ich Wags, Got, Vermag, Ales,
An, Gotes, Segen, ist, Ales, Glegen
Wans, Got, Wil,
Wer, Kans, Wenden.
Virescit, Vulnere, Virtus,

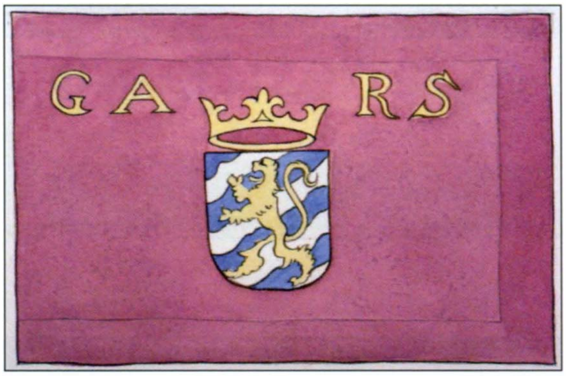
Colonel Thomas Sigmund von Schlammersdorff's
'Old' Regiment of Foot (continued)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

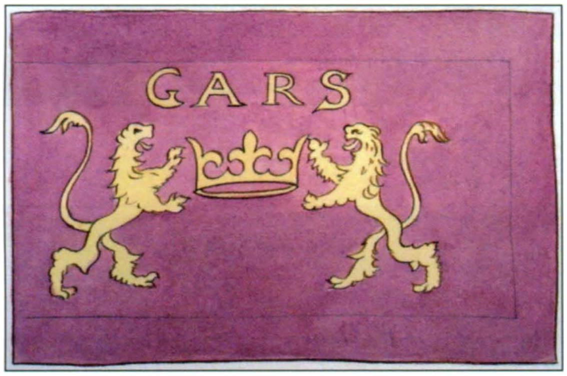
Plate 25

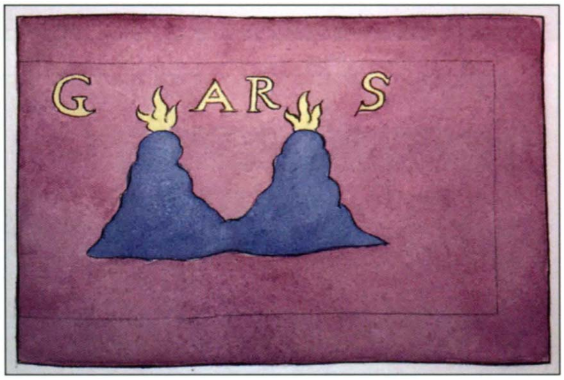


Colonel Adam Schaffman's Cavalry Regiment
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.





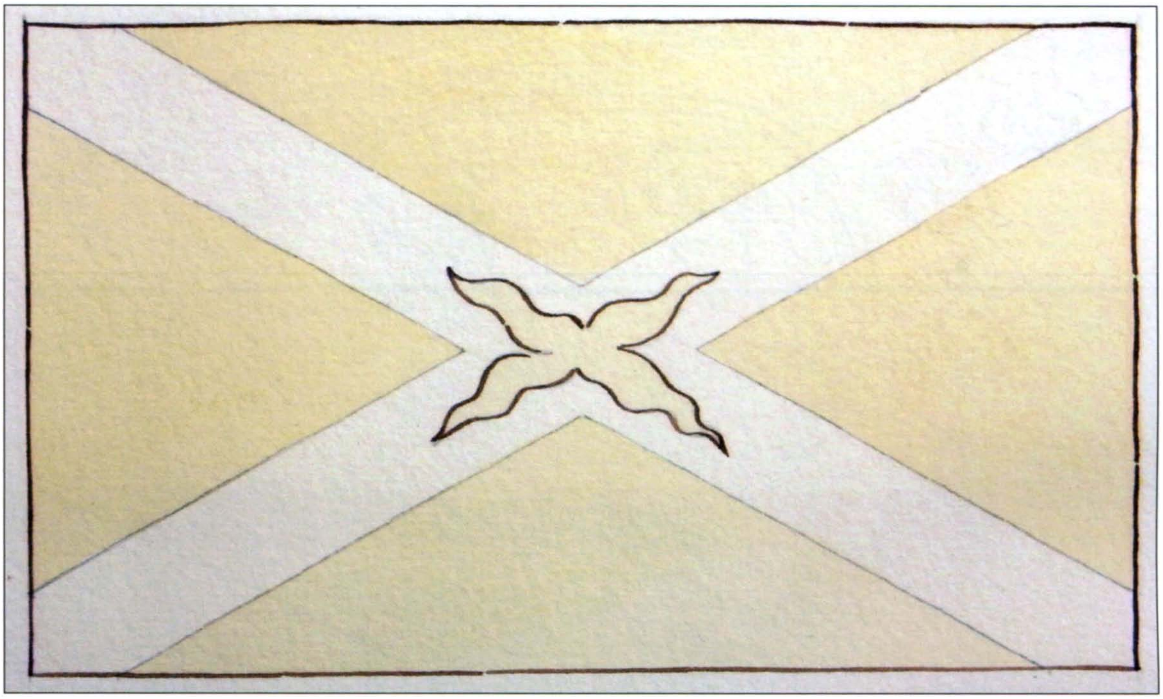


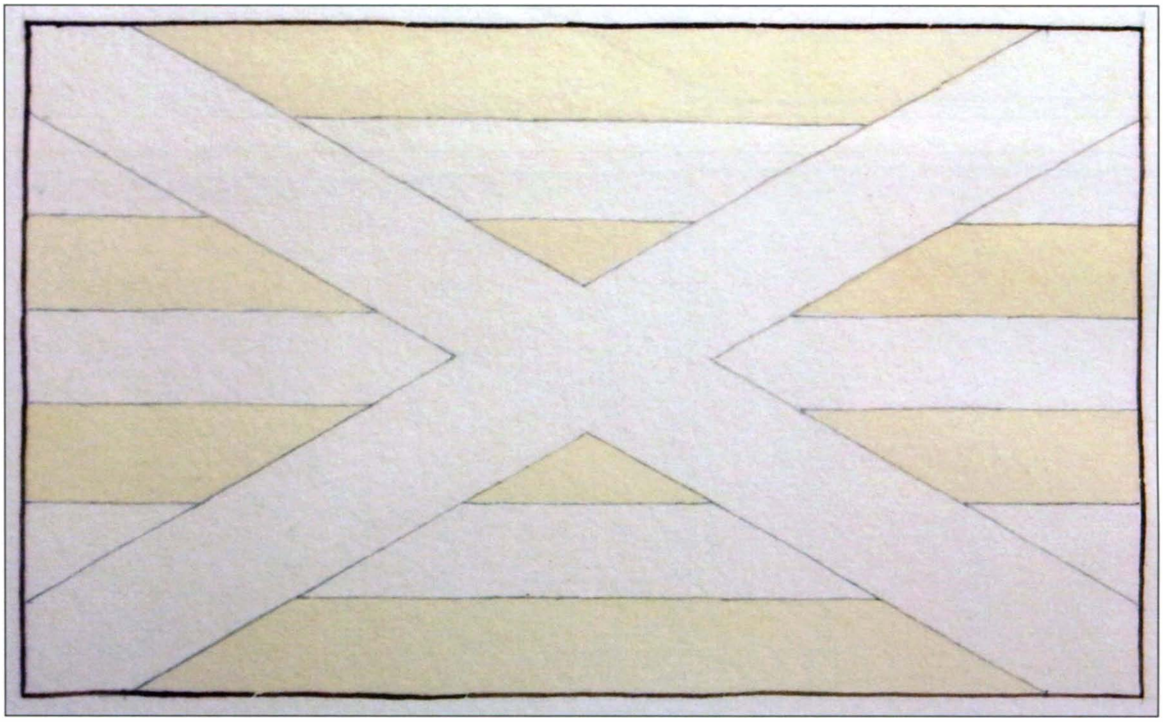


26.4

Uppland Cavalry Regiment
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

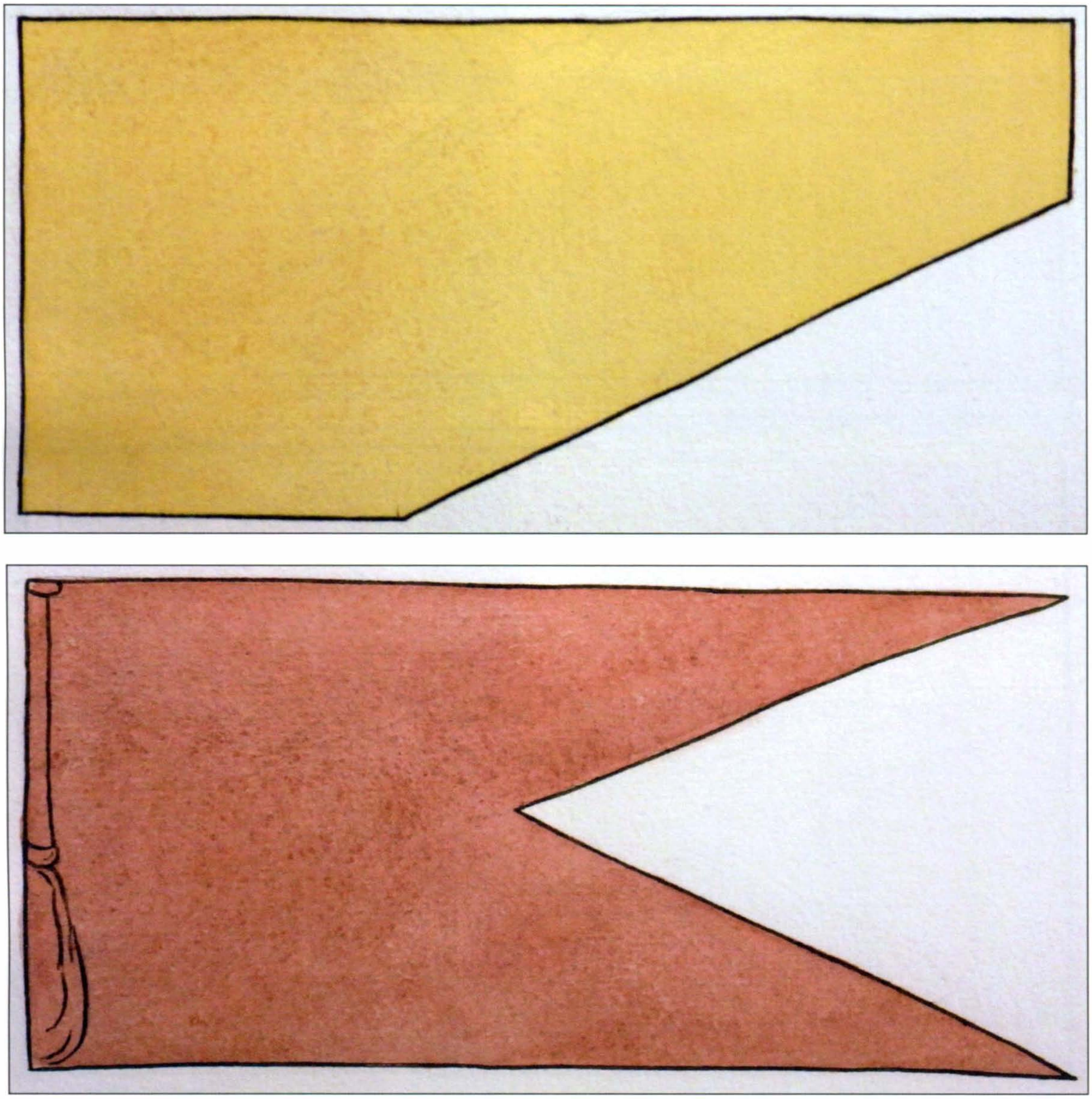
Plate 27





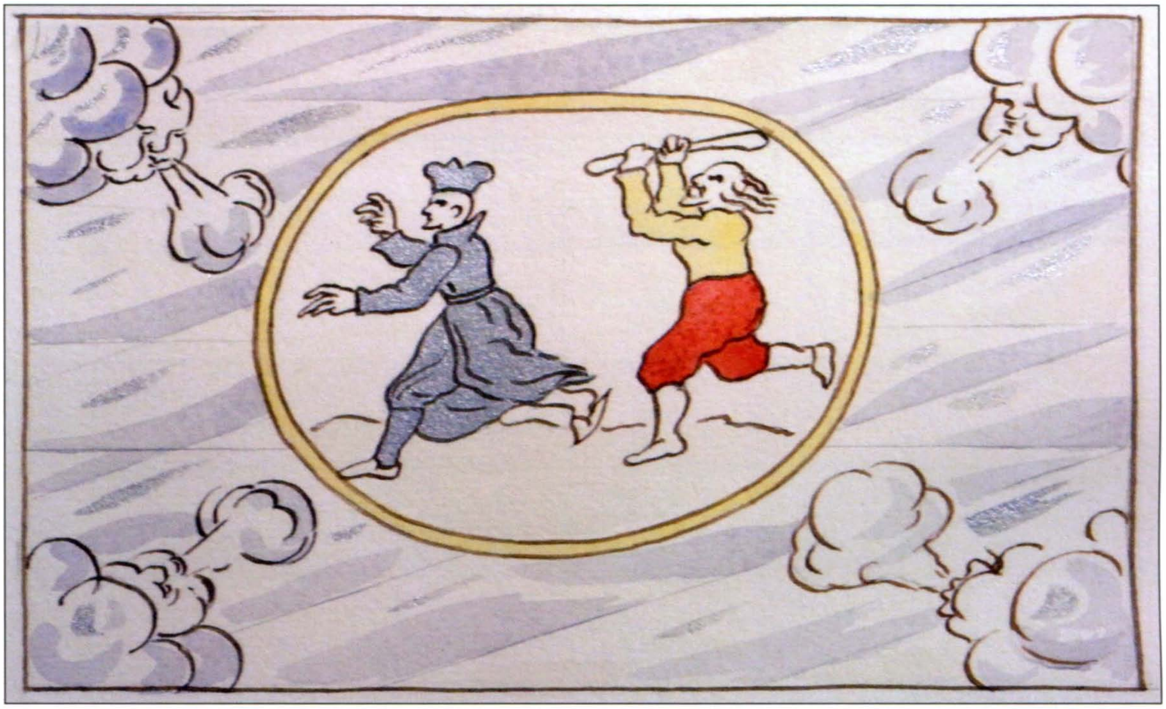
Yellow Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

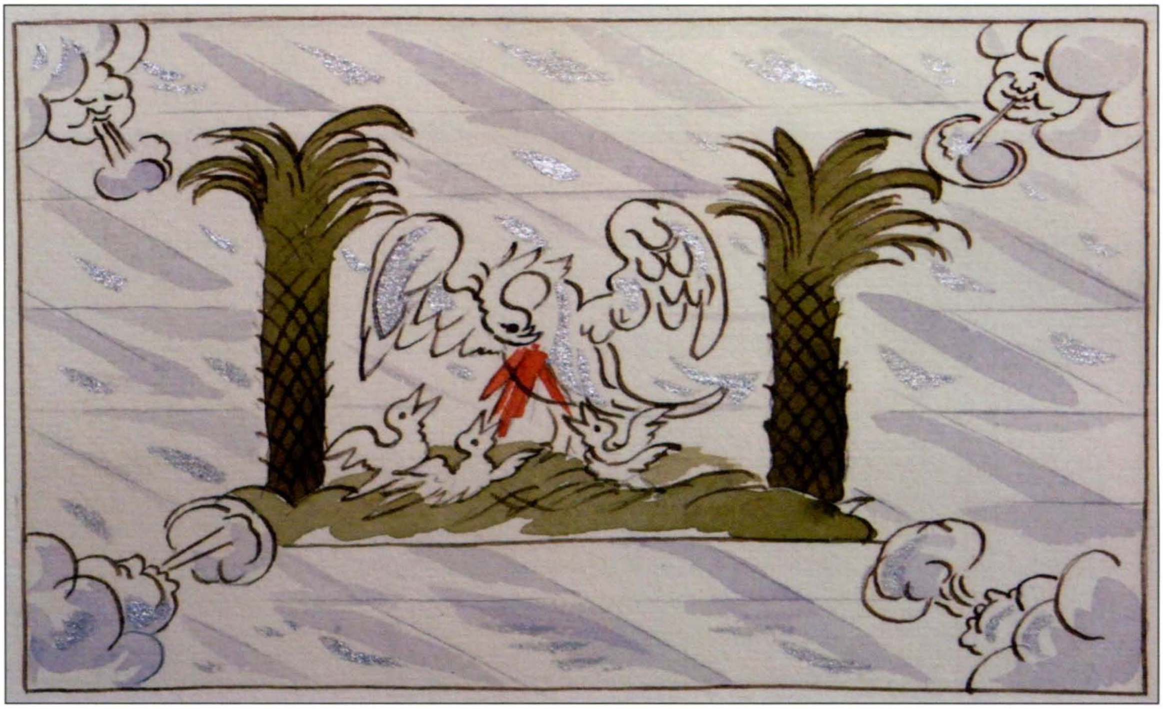
Plate 28



Gustav Horn’s Dragoon Regiment
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

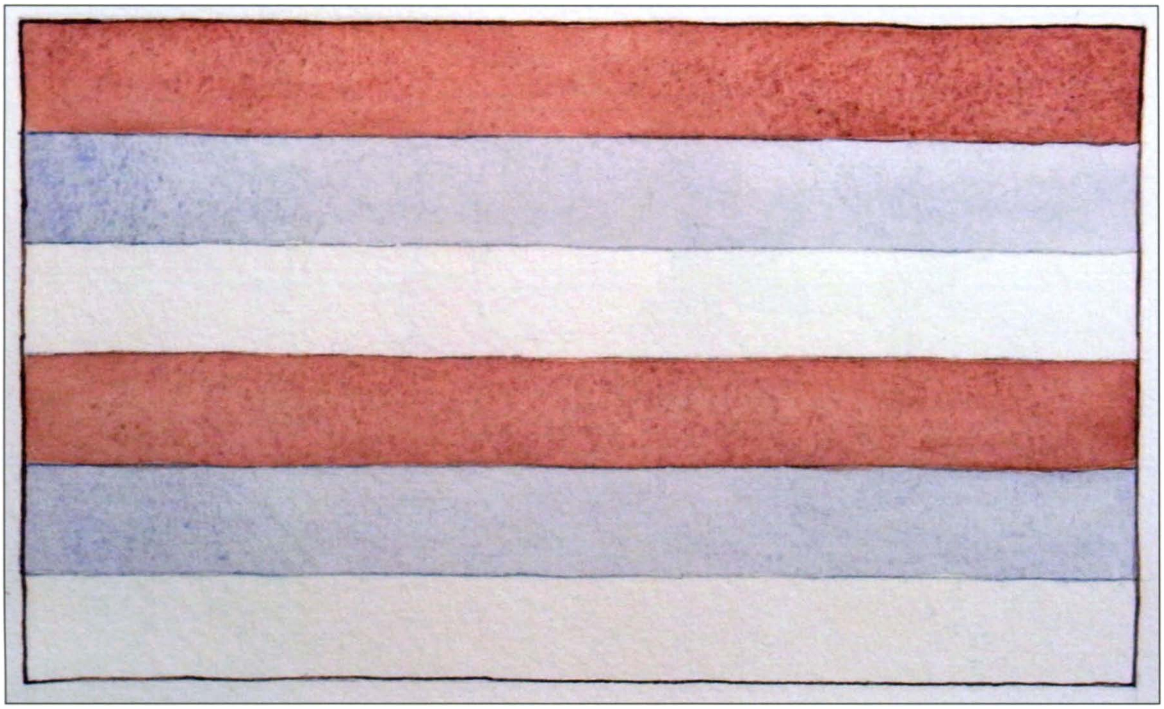
Plate 29

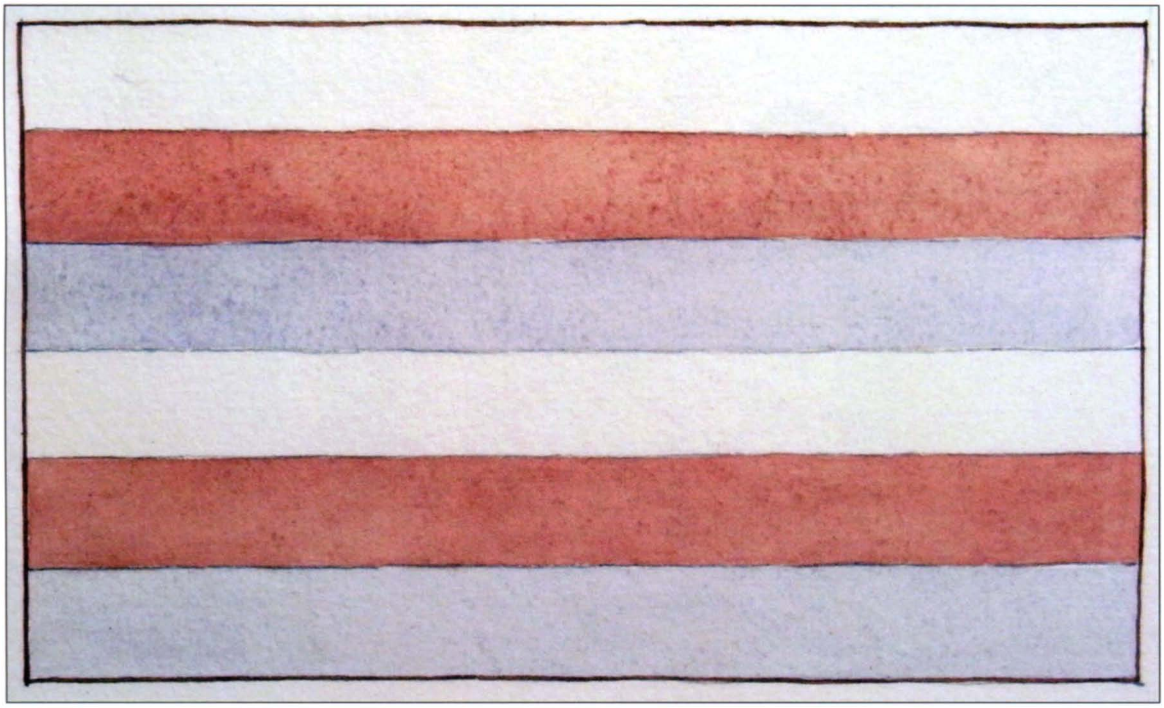




Colonel Wolfgang Heinrich von Isenburg-Büdingen's Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

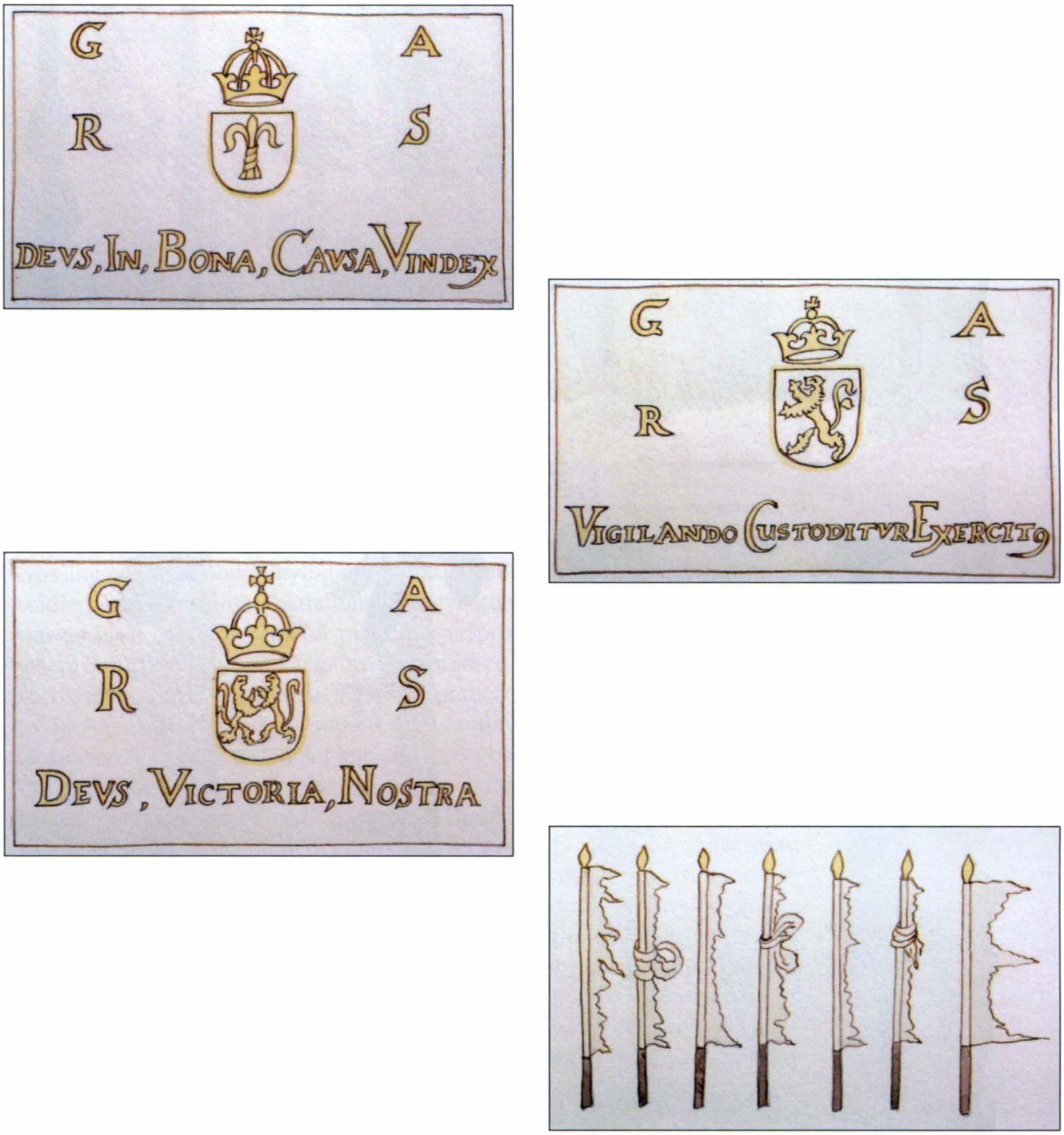
Plate 30





Major General Patrick Ruthven's Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

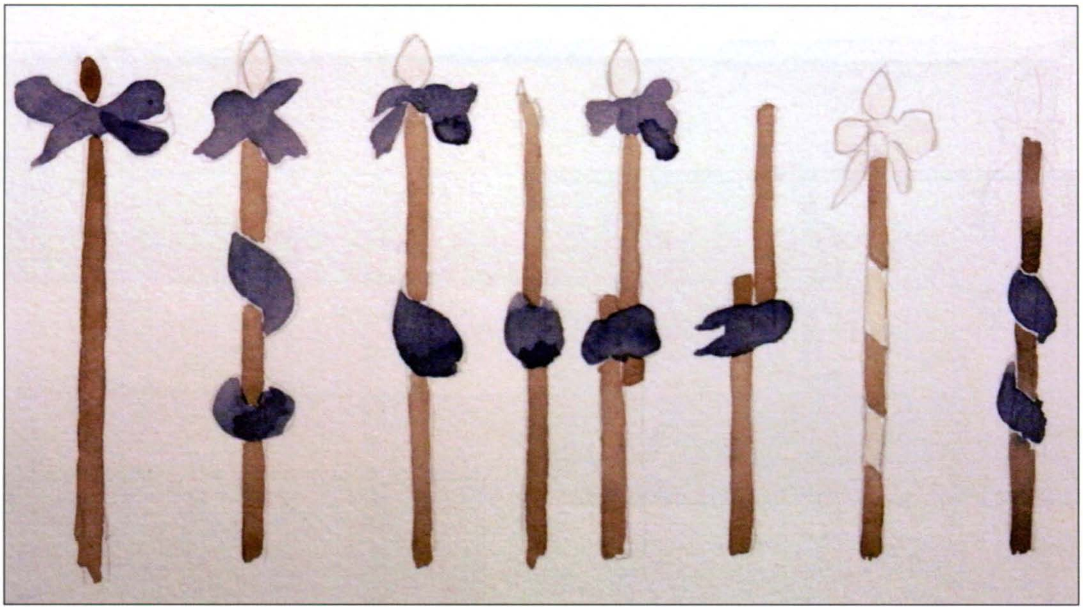
Plate 31


G A R S
DEVS, IN, BONA, CAVSA, VINDEX
G A R S
VIGILANDO CVSTODITVR EXERCIT9
G A R S
DEVS, VICTORIA, NOSTRA

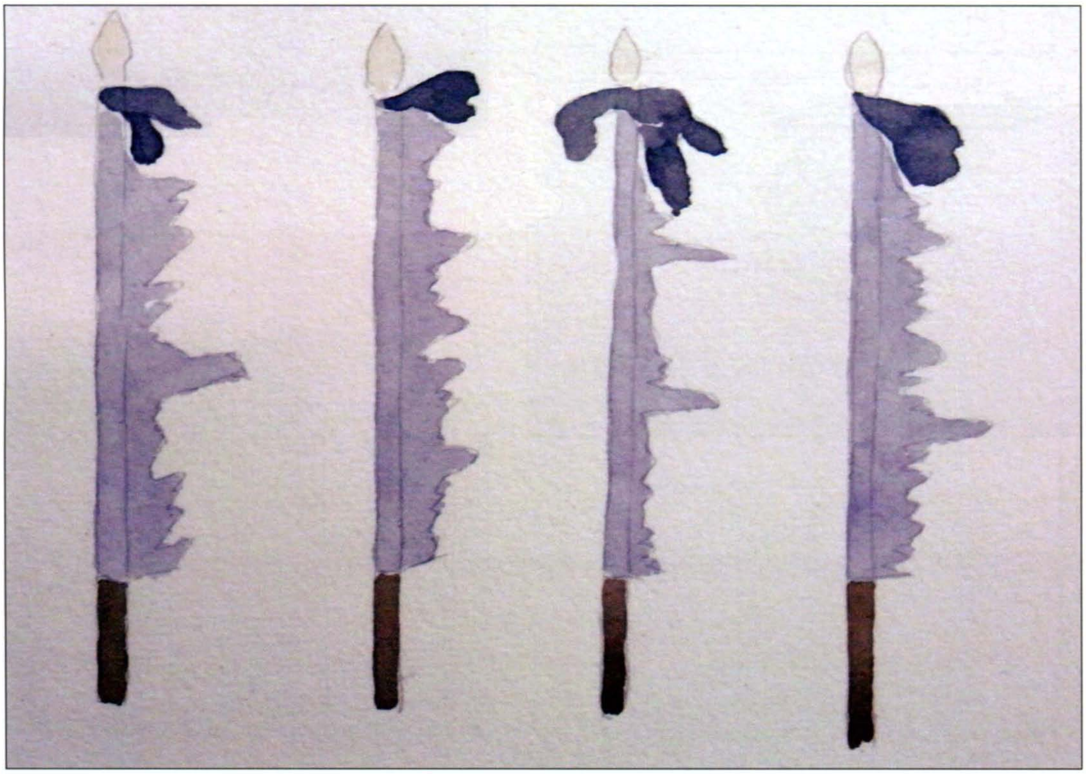
White Regiment of Foot
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.

Plate 32

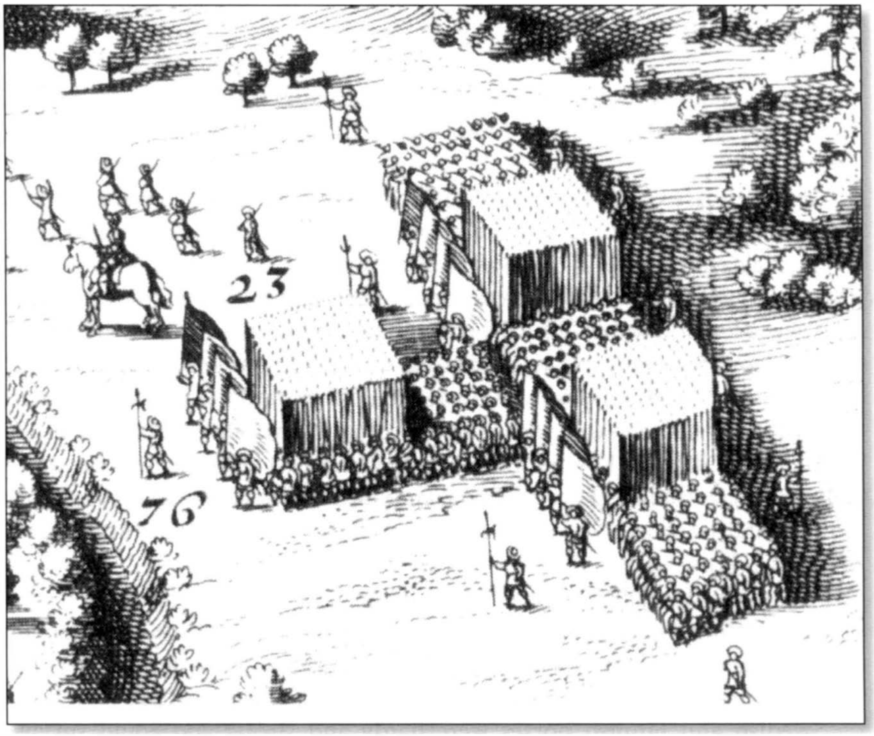
32.1



32.2



Colonel Georg Wulf von Wildenstein's (Black) Regiment of Foot (32.1);
Colonel Caspar Ermes' Regiment of Foot (32.2)
(Riksarkivet, Stockholm. Author's photos)
See Colour Plate Commentaries for further information.



A three-battalion brigade, from the Swedish victory at Oldendorf, 1633. Each battalion consisted of four companies, which is shown by the four company flags in front of the pike blocks. Some under-officers are incorrectly depicted with halberds instead of partisans. The battle of Oldendorf was one of the last in which the brigade formation was used. (***Theatrum Europaeum***)

it was common to detach infantry for garrison duty, holding redoubts or river crossing points, accompanying supply trains, and so on. The organisation of soldiers into companies, battalions, and eventually brigades of certain types was an ideal that was used for planning purposes and on the exercise field, where basic training and discipline was imposed. In battle, it was the training and discipline that kept the men going, not their precise type of organisation.

In the early years of his war in the Commonwealth, some believe that Gustavus Adolphus tested highly artificial geometrical formations, under the influence of the classical works which he had studied, and that the final brigade formation appeared only later.[59] There is no way of knowing if this was so, since the assessment depends on the preserved collection of drawings of battle formations much later collected, and sometimes reconstructed, by Erik Dahlbergh, eventually head of Fortification and quartermaster general, which made him responsible for intelligence. Although Dahlbergh was a very able officer, he was too young personally to have experienced this period of Gustavus Adolphus's tactical thought, and there is accordingly no way of knowing if the surviving illustrations are representative of reality.

Since the brigade was an ad hoc battlefield formation, the introduction of the brigade structure had no effect on the troop-producing units that raised the field companies needed to build battalions.[60]

---

[59] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.69, 84.

[60] It has been noted that a logical development would have been to increase the strength of and restructure the two-battalion field regiment into three battalions, so as to correspond to the most common type of brigade. However, in light of the failure of the territorial regiment experiment, Sweden was probably unable to carry out such a modification to its domestic troop-production

The Cavalry Company

In a cavalry company, the warhorse was more important than the cavalryman. Hence, the strength of a cavalry unit was measured in the number of horses, not men.

The warhorse was not only essential to define a cavalryman as such; it was also a very costly asset. It cost more to purchase a warhorse with gear than to enlist a cavalryman. To this was added the cavalryman's arms and armour. The cost to acquire a warhorse was some 15 Riksdalers. The saddle and other gear would cost another 20 Riksdalers. Then there was the transportation cost to move the warhorse to the field army. In comparison, the enlistment bonus for a cavalryman was around 15 Riksdalers, and the peasant also had to pay the cavalryman one year's salary, which was another 7.5 Riksdalers.[61]

Yet, a Swedish or Finnish horse even at the best of times was no more than a pony, with a height of 140cm as measured behind the saddle. A proper Continental warhorse was on the average 20–30cm taller than the Swedish or Finnish horse.

According to regulations from 1618 and later, each cuirassier should have a good and strong horse of 14 hands (140cm), the second cavalryman brought by each cuirassier should have a horse of 13 hands (130cm), and a light cavalryman should have a horse of at least 12 to 13 hands (120–130cm)in height.[62]

Swedish and Finnish horses were hardy and strong and could survive periods of lack of fodder far better than the Continental ones. Yet, on the Continent, the army frequently attempted to acquire larger horses as replacements for the native ones.

Although Charles IX in 1603 had reduced the size of the cavalry company from 300 to 120 men, in 1611 some companies were again increased to 200 or 300 men.[63] By 1618, there were six cavalry companies in Sweden (including the enlisted King's Life Company of Horse) and four in Finland. In addition, there were the three companies of the retinue of nobles in Sweden and one in Finland. Each of the territorially raised companies was able to produce 125 horses each (Table 13).

Table 13. Cavalry companies, 1618 (sources: Hamilton, *Afhandling*, pp.212–13; *Sveriges krig* vol. 1, p.109)

The King's Life Company of Horse (enlisted)
Uppland Cavalry Company
Södermanland Cavalry Company
Östgöta Cavalry Company
Västgöta Cavalry Company

---

organisation. Yet, there is some evidence that in Germany, Sweden in the period from 1631 to 1632 aimed to structure its enlisted regiments according to the three-battalion model. Barkman, *Gustaf II Adolfs regementsorganisation*, p.105.

[61] Jägerhorn, *Hårdast bland de hårda*, pp.62, 64–5.

[62] Hamilton, *Afhandling*, pp.201–2, 205.

[63] *Ibid.*, p.210.

Småland Cavalry Company
Finnish Cavalry Company (based on western Finland)
Nyland Cavalry Company
Tavastland Cavalry Company
Karelian Cavalry Company

The cavalry, which hitherto had been raised as companies for the field army, with the company as both the administrative and key tactical unit, was from 1623 onwards reorganised into provincial regiments. Axel Oxenstierna in this year proposed, for the following year, a complete cavalry structure based on companies of 125 horses each (Table 14).

Table 14. Swedish cavalry regiments, 1623 (source: Hamilton, *Afhandling*, pp.58, 216)

Unit	Companies	Strength
Enlisted cuirassiers	4	500
Retinue of Nobles Cuirassiers in Sweden and Finland	4	500
Uppland Cavalry Regiment (which also included Västmanland)	3	375
Södermanland Cavalry Regiment (which also included Närke and Värmland)	3	375
Östgöta Cavalry Regiment	3	375
Västgöta Cavalry Regiment	3	375
Småland Cavalry Regiment	3	375
Finland Cavalry Regiment(s)	10	1,250
Livonian Cavalry	1	200
Ingrian Cavalry	1	50
	Total	4,375

The reorganisation was a gradual process which was not concluded until 1634. In the field army, Gustavus Adolphus in spring 1628 ordered the cavalry companies to be formed into permanent squadrons of six companies each. Perhaps more an administrative than tactical decision, it can nonetheless be regarded as one step on the way to establish cavalry regiments. He also appointed lieutenant colonels and majors to head the squadrons. In the field, each should lead three companies. However, in practice the permanent squadrons were anyway divided into field squadrons of from two to four companies each. By the end of the war in the Commonwealth, the field army included 2,300 Swedish and 3,000 Finnish horse. All Finnish cavalry was subordinated Colonel Åke Tott.[64] We have seen that far more cavalry was raised in 1630.

A cavalry company would have around 14 officers and under-officers, many of whom had more than one horse. When regiments were established, the company chaplains and muster-roll scribes were sometimes moved to the regimental staff unit. On the other hand, muster rolls from 1630 show that this by no means was a universal change, and these two posts often remained in the company. Corporals and the *furier* had two horses each, one of which was attended by a servant. Common cavalrymen had only one horse each (Table 15).

Table 15. Composition of a Swedish cavalry company (sources: Hamilton, *Afhandling*, p.214; muster rolls cited in Rumenius, *Wästgöta Ryttare*, pp.25, 57–63).

Position	Men	Horses
Captain (Swedish: *ryttmästare*; German: *Rittmeister*)	1	4
Lieutenant	1	3
Ensign	1	3
Furier (Swedish: *furerare*)	1	2
Corporals	2–3	4–6
Chaplain	1	1
Muster-roll scribe	1	1
Quartermaster	1	1
Barber-Surgeon	1	1
Trumpeter	1	1
Farrier	1	1
Provost (Swedish: *profoss*; German: *Profoß*)	1	1
Cavalrymen	100	100
Total	113–114	123–125

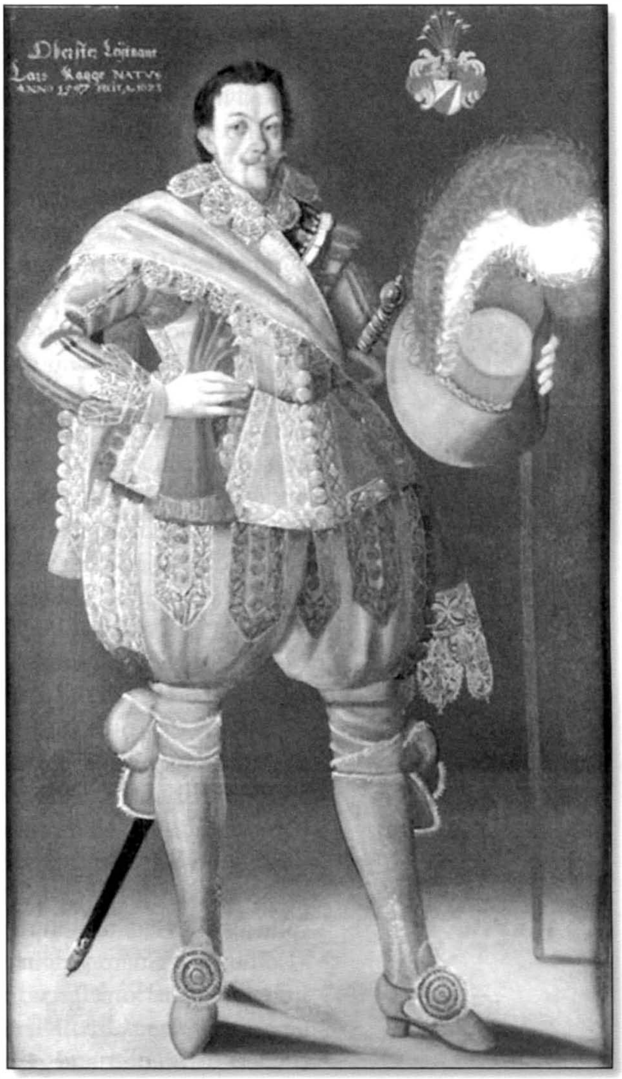
---

[64] Jägerhorn, *Hårdast bland de hårda*, p.61.

The cavalry was raised as companies but fought in squadrons. At the time of the invasion of Germany, the regimental structure had not found its final form. A cavalry squadron usually equalled half a regiment, or four companies. Nominally, a Swedish cavalry regiment had an establishment strength of 1,000 horses, divided into eight companies each of about 125 horses. It follows that a squadron consisting of two companies then would have an establishment strength of 250 horses.

As always, the establishment strength was seldom representative of reality. A company might be slightly over-strength at the outset of a campaign.[65] Then, with mounting losses, it would gradually fall below establishment strength.

Two examples, from 1631 and 1648, respectively, illustrate how variations might be small, but they still departed from establishment strength. When the remaining squadron of Finnish cavalry, under Lieutenant Colonel Hans Ekholt, was mobilised for the campaign in Germany in 1631 (the others had by then already been shipped overseas), it consisted of four companies of from 112 to 125 men, or 123 to 137 horses, each, in addition to a staff unit of 13 men and 22 horses. Each cavalryman was armed with a horse, two pistols, and a rapier, but in at least one company, only two of the common cavalrymen had breast- and backplate and helmet. The shortage was known, and Gustavus Adolphus had instructed that whenever there was a shortage in armour, the armoured men should be placed in the first cavalry ranks.[66] In 1648, Olof Silverlood's company of Västgöta Cavalry Regiment counted 110 cavalrymen and a staff unit of 18.[67]



Lars Kagg, 1623. (Georg Günther Kräill)

During the war, Imperial propaganda played on the exotic aspects of the Swedish army. In particular the Finnish cavalry was often labelled as savage Easterners, almost Asiatics, who due to their lack of civilisation abused the innocent Christians of Germany. However, the Finnish cavalry was raised from Finland's coastal areas, where the Swedish population was concentrated. As a result, many of the Finnish cavalry companies were Swedish-speaking.

---

[65] Rumenius, *Wästgöta Ryttare*, pp.41–7, 49–55, 65–73, 75–81, 83–9, 91–7, 99–105. Rumenius reprints the muster rolls for the Västgöta Cavalry Regiment.

[66] Jägerhorn, *Hårdast bland de hårda*, p.88.

[67] Rumenius, *Wästgöta Ryttare*, p.17.

Others were Finnish-speaking, and for these, bilingual officers were chosen.[68] There was little, if any, difference in the fighting style of the cavalry companies raised in Finland and Sweden, respectively.

The Finnish cavalry in time became known as Hackapells, which allegedly derived from their war cry *hakkaa päälle!* ('Fall on!'). However, during the war itself this name was seldom used. The term seems to have appeared in writing for the first time in 1626, following the Swedish victory at Wallhof.[69] Monro used the term, probably based on information from the Finnish cavalry commander Torsten Stålhandske (1593–1642) who spoke 'excellent good English' since he had grown up with his stepfather, the Scottish Major Robert Guthrie, and in his youth once followed Colonel Patrick Ruthven to Scotland to enlist more men. Monro referred to 'Horsemen of *Hagapells*' or 'Finnes and Haggapells' which in the latter case suggests that he had two different types of soldiers in mind (possibly, cuirassiers and light horse).[70] The term also appeared in a German prayer (*Ex agamine haccapellorum libera nos Domine*, 'God save us from the corps of Hackapells'), and appeared briefly in other sources, too.[71] In other words, the term existed during the war, but it was never the name of a particular unit or, so it seems, even a particular type of cavalry.

The Life Guard Company and Household Regiment

By tradition and for reasons of combat readiness, the senior regiment in the Swedish army was always enlisted. It constituted the King's personal life guard. Being the military unit closest to the King, it frequently changed designation, leadership, organisation, and to some extent armament. This was particularly the case at times of royal succession, when the new sovereign found it particularly important to retain a loyal life guard.

The Life Guard originated with Gustavus I. In time, his small, personal infantry guard unit grew into a company-sized unit, known as the Drabant Guard (*Drabantkåren*). This unit continuously followed the King. In addition, there was a second, and generally larger, infantry unit at the King's disposal. This was the Household Company (*Gårdsfänikan*), which guarded the royal palace. Charles IX made his Drabant Guard into a regular infantry company, known as the Drabant Company (*Drabantfänikan*). He used both this and the Household Company as regular combat units. However, the Household Company was in 1608 reassigned in status to that of a provincial company in Uppland.[72]

When Gustavus Adolphus ascended to the throne, he inherited the Drabant Company from his late father. Retaining this unit as an independent life guard company, Gustavus Adolphus in 1613 ordered Colonel Reinhold Taube to enlist a whole infantry regiment for the King's personal use. Taube had commanded regiments in Swedish service since the campaign in

---

[68] Jägerhorn, *Hårdast bland de hårda*, p.130.

[69] *Ibid.*, p.104.

[70] Monro, *Monro His Expedition* vol. 2, pp.55, 65.

[71] Lappalainen, *Det nordiska lejonet*, 296; Pleiss, *Bodenständige Bevölkerung*, pp.34–6.

[72] *Kungl. Svea livgardes historia* vol. 2, pp.417, 421–2, 425, 429, 437.

Muscovy in 1609–1610, after which he fought in the Kalmar War. Primarily raised from Germans and Scots in Swedish service, the regiment became known as the King's Regiment (formally, *Hans Kungliga Majestäts regemente*). It consisted of four companies, each with a planned strength of 300 men. In reality, the total strength reached only 915 men. Taube and the King's Regiment fought in Muscovy in 1613, where Taube fell in battle. Because of the death of Taube, and considerable losses, Gustavus Adolphus had the remnants of the King's Regiment reconstituted. In practical terms, this became a mostly new enlisted regiment, but with the same name. It served with the King at the siege of Pskov, after which it was disbanded in 1616.[73]

In 1618, Gustavus Adolphus instead established a Drabant Regiment out of the Life Guard Company, four primarily German companies, and Jacob Duwall's company. It was intended to have the same strength and function as a territorial regiment. While the name Drabant Regiment certainly was used, the formation was more commonly referred to after its colonel, Philipp von Mansfeld (1589–1657), as Mansfeld's Regiment (Mansfeld was captured by the Imperials in 1622, changed sides, and in 1628 became Wallenstein's commandant of the Imperial Baltic fleet).[74] In 1621, the regiment was restructured as a field regiment in preparation for the invasion of Livonia. At the same time, it became known as the Household Regiment (*Hovregementet*). However, because of the preponderance of German- and English-speaking officers, it became better known, in German, as the *Leibregiment* and, in English, as the Life Regiment. From 1622, it was also frequently referred to as the Life Guard, a term previously referred for the Drabant Guard.[75] In 1623, plans were made for further enlistment so that the regiment could grow into three field regiments. However, eventually the companies already deployed overseas lost the status of Household Regiment.[76]

A new enlisted regiment in Stockholm assumed this role. In 1624, Gustavus Adolphus established a new Household Regiment, for whichx1x he enlisted 1,200 men from Germany. At the same time, he for a short period incorporated the independent Life Guard Company into the new Household Regiment. He then reassigned the old Household Regiment to the status of a regular enlisted regiment. Gustavus Adolphus did not immediately appoint a new colonel, possibly wishing to reserve this position for himself.[77] However, in May 1625 Count Franz Bernhard von Thurn was appointed colonel of the Household Regiment.[78] By then, Johan Jacob Wildeisen had been appointed captain-lieutenant of the Life Guard.[79] Wildeisen's appointment to an intermediate rank between lieutenant and captain suggests that Gustavus Adolphus regarded himself as the company's nominal captain.

---

[73] *Kungl. Svea livgardes historia* 3:1, pp.180–81, 211–15, 211–16, 230–2, 243–4.

[74] *Ibid.*, pp.273, 310.

[75] *Ibid.*, pp.323, 331.

[76] *Ibid.*, pp.405–6.

[77] *Ibid.*, pp.419–20, 425, 427–8.

[78] *Ibid.*, pp.436.

[79] *Ibid.*, pp.432.

In 1626, the Household Regiment was for the first time referred to as the Yellow Regiment, likely because of the men's yellow uniforms.[80]

Service in the Life Guard was prestigious, and many former officers served as common soldiers there while they awaited a new command. The Life Guard also functioned as a kind of training establishment for officers, and the unit's language of command was German. Although used for parades and ceremonial occasions, it remained a fighting unit and was organised, as other field units, into pikemen and musketeers. Training in the use of arms and exercise in field formations constituted an important part of everyday activities.[81] On ceremonial occasions, the pikemen carried costly partisans instead of pikes. The Life Guard was mounted, so as to be able to accompany the King on his travels, but fought on foot.[82]

Having returned to Stockholm from the campaign in the Commonwealth in late 1626, Gustavus Adolphus again detached the Life Guard company from the Household Regiment (although it would be fielded with the Household Regiment). He moved Wildeisen to command another company in the Household Regiment, and instead promoted the Life Guard's ensign since 1624, Lennart Torstensson, to captain-lieutenant.[83] For this reason, the Life Guard was not subordinated the Household Regiment in 1627.[84] As for Wildeisen, he was in time promoted to lieutenant colonel of the Yellow Regiment and, as noted, fell at the storm of Demmin in February 1631.

In November 1627, Colonel Maximilian Teuffel replaced Thurn as the head of the Household Regiment. Thurn instead was appointed infantry commander under Field Marshal Wrangel and, in this position, was in 1628 promoted to Major General.[85]

The King's Life Company of Horse and Life Regiment of Horse

When Gustavus Adolphus inherited the army from his late father, he already had his own Life Company of Horse which he immediately merged into the King's Life Company of Horse (*Kungl. Majestäts Livfana* or *Konungens Livfana*). This was an enlisted cavalry company which functioned as a fighting unit. For this reason, the company did not continuously follow the King. For instance, the King's Life Company of Horse, under Herman Wrangel, deployed with the field army to Muscovy and in 1614 was present at Novgorod.[86] In a process similar to that of the Life Guard, the King's Life Company of Horse was no permanent structure but essentially functioned as any enlisted cavalry company and eventually was disbanded.

---

[80] *Ibid.*, pp.495.

[81] Bertil C:son Barkman, Sven Lundkvist, and Lars Tersmeden, *Kungl. Svea livgardes historia* 3:2: *1632 (1611–1660)* (Stockholm: Stiftelsen för Svea livgardes historia, 1966), p.641.

[82] Jägerhorn, *Hårdast bland de hårda*, pp.33–4.

[83] *Kungl. Svea livgardes historia* 3:1, pp.504–6.

[84] Jägerhorn, *Hårdast bland de hårda*, p.212.

[85] *Kungl. Svea livgardes historia* 3:1, p.535.

[86] *Ibid.*, pp.180, 215.

It was eventually replaced by the King's Life Cuirassier Company (*Konungens livkyrassiärkompani*), an enlisted unit raised in 1626 by Jürgen Aderkas. Its successor can be said to have been Johann Philip von Ortenburg's Cavalry Regiment, an enlisted regiment of horse which was formed in Pomerania in late 1630 from four cavalry companies from Prussia, another four cavalry companies enlisted in Stralsund, and two cavalry companies from Sweden. Known as the King's Life Regiment of Horse (*Konungens livregemente till häst*), it was regarded as an elite regiment. Ortenburg (1592–1631) soon died from illness, and the regiment was then commanded, in his name, by Georg von Uslar (1584–1638), who acquired the regiment after the battle of Breitenfeld later in the year and remained its colonel.[87]

Colour Regiments

Gustavus Adolphus commanded several regiments known by colours (the yellow, blue, red, and so on). Many appear to have been regarded as elite or at least senior in rank among the Swedish field regiments. The first certain references to colour regiments derive from 1626, although the regiments themselves in same cases were older. The colour denomination was for long believed to refer only to the regimental colours under which they fought, since many of them fought under standards of the appropriate colour. However, especially in the early years there is somewhat more evidence for the use of the appropriate colour for uniforms than for regimental colours. For instance, at the battle of Lützen in 1632, the Yellow Regiment fought under yellow colours, but they had by then worn yellow uniforms for years, and long before the introduction of yellow colours.[88] There is thus reason to assume that the colour regiments received their popular names, at least in most cases, from the colour of their uniforms.

The most senior was the Yellow (or Household) Regiment, which was known under this name at Dirschau in 1626. In Germany, Imperial soldiers and locals referred to the men of the Yellow Regiment as 'yellowcoats' (*Gelbröckel*).[89] Despite taking appalling casualties at Lützen, the regiment retained its identity. The survivors were reorganised, new enlistment took place, and the regiment in 1635 followed Bernard of Saxe-Weimar into French service, while the Life Guard survivors instead followed the King's body to Wolgast, from which a few continued to accompany the late King to Stockholm, where they were incorporated into a new Household Regiment.

Second in rank was already then, no doubt, the Blue Regiment, also known to have been at Dirschau in 1626.[90] This was probably Georg von

---

[87] *Sveriges krig* vol. 4, p.369; Jan Glete, *Värvade regementen i svensk tjänst 1618–1631* (working paper, dated 30 September 2005; available online).

[88] Erik Bellander, *Dräkt och uniform: Den svenska arméns beklädnad från 1500-talets början fram till våra dagar* (Stockholm: P.A. Norstedt & Söner, 1973), p.104.

[89] *Kungl. Svea livgardes historia* 3:2, p.514.

[90] *Kungl. Svea livgardes historia* 3:1, p.488.

Arnim's German regiment, which was established in 1624. Arnim served as the regiment's first colonel. From late 1625, the regiment was led by Maximilian Teuffel, who when in late 1627 he became the head of the Yellow Regiment was followed by Hans von der Noth. From 1630, Georg aus dem Winckel (1596–1639), formerly a captain and then lieutenant colonel of the Household Regiment, commanded the Blue Regiment. By 1633, the Blue Regiment was listed as second in rank, after the Yellow.[91] The Blue Regiment wore blue colours as well as blue uniforms, for which their opponents referred to them as 'bluecoats' (*Blauröckel*). The Blue Regiment predominantly consisted of German soldiers. It also took appalling casualties at Lützen but, like the Yellow, retained its identity. The name Blue Regiment was used until 1652, when the regiment formally was dissolved.[92]

The Red Regiment is also known to have been at Dirschau in 1626, and it was present at the second battle of Mewe. In 1627, the regiment received red colours and the men at least in 1628 were reported to have worn red coats, being known as 'redcoats' (*Rothröckel*). The regiment was enlisted in Germany in 1624 by Franz Bernhard von Thurn.[93]

The Green Regiment was originally a Brandenburg expeditionary corps of 1,800 men to the Polish-Lithuanian Commonwealth, which in Prussia went into Swedish service in 1627. Gustavus Adolphus ordered new green colours for these men and named the formation the Green Regiment.[94] In this case, there was accordingly no known link to green uniforms. In 1628, many Scots and English joined the regiment, which from 1629 was headed by Colonel Sir John Hepburn (*c.* 1598–1636), a Scots officer and Catholic. It was also known as the German Green Regiment and the King's Green Life Regiment of Foot. Hepburn left the regiment soon before the battle of Lützen. In 1635, the regiment went into French service. Some of the Scots of the regiment then rejoined Hepburn, who had set up a new regiment on behalf of France. For this reason, some see a link between the Green Regiment in Swedish service and the later Royal Scots regiment of the British army.[95]

The White Regiment, under Siegfried von Damitz (1592–1631) who fell at Breitenfeld, was originally the garrison of Stettin. Both the regiment and its commander went into Swedish service on the day after the surrender of Stettin in 1630. Damitz remained in command at the 1631 conquest of Frankfurt-an-der-Oder.[96] In 1635, the regiment is known to have been under Lennart Torstensson in Germany.[97]

---

[91] Bellander, *Dräkt och uniform*, pp.102–3.

[92] In 1624, Jacob Spens enlisted a regiment of Scots, and at least in late 1625, Spens' Regiment wore blue jackets; however, this was a different regiment.Jakobsson, *Lantmilitär beväpning och beklädnad*, p.389 n.2.

[93] Israel Hoppe, *Geschichte des ersten schwedisch-polnischen Krieges in Preussen* (Leipzig: Duncker & Humblot, 1887), p.247; Bellander, *Dräkt och uniform*, pp.103, 104.

[94] Hoppe, *Geschichte*, pp.188–9.

[95] Bellander, *Dräkt och uniform*, pp.103–4.

[96] *Sveriges krig* vol. 3, p.425; Monro, *Monro His Expedition*, vol. 2, p.31.

[97] Bellander, *Dräkt och uniform*, p.103.

The Orange Regiment was another German regiment. It was raised in Brandenburg by Johann Vitzthum von Eckstädt in 1630. The regiment participated in the conquest of Wolgast.[98]

The Black Regiment, or rather regiments, were raised in 1629 by Dietrich von Falkenberg. Three regiments were raised, and in early 1630, a fourth Black Regiment was possibly raised as well, by Knyphausen. The last may have been the one present at the 1630 conquest of Wolgast.[99]

The Brown Regiment was raised in 1630 by Melchior von Dargits. It took part in the 1631 conquest of Frankfurt-an-der-Oder. Dargitz died soon after and the regiment was probably disbanded.[100]

Finally, there was the Blue-and-White Regiment, which existed at the 1631 conquest of Frankfurt-an-der-Oder.[101]

It is likely that most colour regiments of foot at least to some extent derived their names from the colour of the men's uniforms.

In addition, there were what might be called colour cavalry regiments, including the Uppland Cavalry Regiment, which also was known as the Red Regiment of Horse, and the Blue Regiment of Horse.[102] However, as far as is known, the name referred to the unit's standards, not uniforms.

The colour regiments soon formed the basis of the colour brigades established in the field army. For instance, the Yellow Brigade was named after the Yellow Regiment, while the Blue Brigade was based on the Blue Regiment. The Red Brigade was named after the Red Regiment but also included battalions from the Swedish Östergötland and Västergötland regiments. The Green Brigade was based on the Green Regiment and two other Scots regiments, including Mackay's Regiment. The White Brigade was named after the White Regiment. The colour names were popular, not formal names. In muster rolls and similar documents, the regiments were named after their colonels.[103] Besides this, while regiments and the battalions that were formed out of them to some extent would be uniformed, the brigades were not necessarily so. In most cases, only the colour regiment which gave the brigade its name would be recognised by its use of the appropriate colour.

Moreover, the colour regiments were few. Most units, in particular those enlisted in Germany, had no tradition of uniform dress. Due to wear and tear, we can assume that even within the colour regiments, many men wore dress of different colour.

---

[98] Print from Danckaertz, *Historis oft Waerachtich Verhael*, 166; reproduced in *Sveriges krig* vol. 3, p.432; Brzezinski, *Army of Gustavus Adolphus* vol. 1, p.13.

[99] Print from Danckaertz, *Historis oft Waerachtich Verhael*, 166; reproduced in *Sveriges krig* vol. 3, 432; Brzezinski, *Army of Gustavus Adolphus* vol. 1, pp.12, 13.

[100] Print by Franz Hogenberg, Rijksmuseum, Amsterdam, depicting the 1631 conquest of Frankfurt-an-der-Oder, reprinted in Bellander, *Dräkt och uniform*, p.94; Brzezinski, *Army of Gustavus Adolphus* vol. 1, p.14.

[101] Print by Franz Hogenberg, Rijksmuseum, Amsterdam, depicting the 1631 conquest of Frankfurt-an-der-Oder, reprinted in Bellander, *Dräkt och uniform*, p.94.

[102] Bellander, *Dräkt och uniform*, p.103; Brzezinski, *Army of Gustavus Adolphus* vol. 2, pp. 13, 40.

[103] Bellander, *Dräkt och uniform*, p.104.

Enlisted Units

A large number of regiments were enlisted when the need arose and funding was available. Most were infantry, but dragoons and cavalry were enlisted, too. Cavalry units were commonly enlisted as companies or squadrons, and many never reached regimental strength, or alternatively, several companies of different origin were combined as new regiments. The number of enlisted units changed according to needs and availability, and was by no means constant.

Early in the reign of Gustavus Adolphus, there were only few enlisted cavalry units. In 1615, the army included only six enlisted cavalry companies (*fana*, pl. *fanor*; literally meaning 'flag'). These were, in addition to the aforementioned King's Life Company of Horse, the Commanding General's Company, Field Marshal's Company, and three companies of Livonian cavalry, in total 1,200 men.[104]

It has been estimated that up to and including 1628, the Swedish Crown enlisted units (of larger than company size) corresponding to seven infantry regiments, two cavalry regiments, and two cavalry squadrons. From 1629 to September 1631, the Crown enlisted a total of 33 infantry regiments, 11 cavalry regiments, and five dragoon regiments. More than half of the colonels of the enlisted regiments had previously served in the Swedish army, which shows that although the men were enlisted in Britain or on the Continent, the commanding officers had some knowledge of Swedish organisation and tactics.[105] Gustavus Adolphus expected the enlisted regiments, too, to fight in the Swedish manner. As mentioned, military manuals were published for foreign officers who intended to go into Swedish service, together with blank contracts for colonels who wished to enlist a unit for the Swedish army.

Among the many enlisted regiments, a representative sample is included in Appendix III, together with their status at the end of the reign of Gustavus Adolphus. There were many others as well, and companies and battalions were frequently recombined into new regiments as needed.

Logistics

Logistics was not only the key to waging war, it also formed the daily background to army life. For the soldier, battles were exceptional events in a life-style that was centred on seemingly eternal marches back and forth across the country, the gathering of provisions and supplies, and longer or shorter stays in quarters of different kinds and standards.

In the sixteenth and early seventeenth century, Sweden had not yet developed a functioning logistics system. During Gustavus Adolphus's war in Livonia, logistics presented continuous difficulties. For instance, almost all tax revenues from Finland (most of it which came in kind, not cash) were earmarked for the Swedish garrisons in Estonia and Livonia, but there was no system to move the provisions there. All was handled on an ad hoc basis. The most common way to get supplies was to send an officer to Finland to get them, then transport the provisions back to the garrison.[106] From 1624 onwards, there were attempts to establish military colonies in Estonia, Livonia, and Ingria, in which soldiers, primarily from Finland, would farm the land to provide their own supplies. They were divided into colony companies, or in some cases separate garrisons. Colonies were located in, among others, Reval, Pernau, Dorpat, Wolmar, Wenden, Riga, Kokenhusen, Kexholm, and Nöteborg. However, most colonies barely supported itself. In 1642, the companies were combined into the Colony Regiment, with headquarters in Dorpat.[107]

---

[104] Hamilton, *Afhandling*, p.196.
[105] Glete, *Värvade regementen*.

Previously, like in other underdeveloped and structurally weak states such as Muscovy, the Swedish Crown had avoided building good roads, since such would support an invader and enable rapid movements into the heartland of the country. However, with the increased focus on efficient procedures for raising revenues (taxation) and moving supplies, it became necessary to augment the road network. So did Gustavus Adolphus, for instance, already in 1620 order the governors in Finland to improve the roads.[108] From this time onwards, the Crown also made attempts to establish inns at regular intervals. The local peasants were required to provide horses and drivers as transportation from the inn near them to the next one along the road. While this was another duty imposed from above, the system was also intended to protect the peasants by removing the necessity for travelling nobles and officials to confiscate the required horses by force, which hitherto had resulted in much hostility. Another innovation, begun around 1630, was to hire local officers for the task of overseeing the maintenance of roads and bridges.[109]

Supplies were moved as needed and available, by whatever means at hand: ships, river transports, carts, sledges, horses, and in the north, reindeer. In times of war, the army, whenever possible, followed the major rivers, such as the Dvina in Livonia and the Oder early in the German campaign. Gustavus Adolphus would collect a river armada of up to 50 transport vessels that could move supplies, the artillery, and some troops. Some of the vessels, including the Oder Flotilla under Alexander Leslie, carried cannons that were used as a support weapon.

Money-wise, the Swedish army to a considerable extent paid for its activities by borrowing. Less conspicuous to the outside observer than the demand for contributions and looting but possibly of greater significance, the funds needed were borrowed from local merchants. Each individual loan was usually not that big; on average apparently a few thousand Riksdalers. For instance, an infantry regiment cost 6,920 Riksdalers per month to operate while a company of horse cost 1,961 Riksdalers. The purchase and shipping of supplies, horses, and other goods or services also had to be paid for. In exchange for the provision of funds, the army would give the merchant a

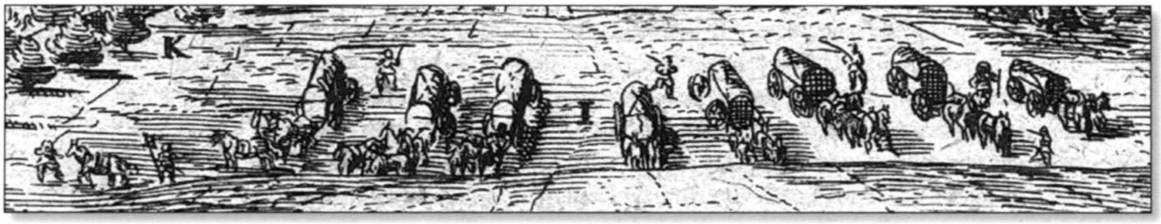
---

[106] Lappalainen, *Det nordiska lejonet*, p.190.

[107] Tom Gullberg and Mikko Huhtamies, *På vakt i öster* vol. 3 (np: Schildts, 2004), pp.174–80, 187–8.

[108] Lappalainen, *Det nordiska lejonet*, p.224; citing a royal warrant, date 7 September 1620 (O.S.).

[109] *Ibid.*, p.226.



Part of the Swedish supply train, battle of Lützen, 1632. (*Theatrum Europaeum*)

letter of credit that could be cashed, at a later date, in Amsterdam. This was beneficial for both parties. Amsterdam was the centre of European finance, and Sweden received revenues there from various sources, including the sale of copper, tar, Russian grain (as noted, Muscovy provided a significant subsidy to Sweden through grain transactions[110]), and other exports, but also the subsidies received from France. By this means, the army received sorely needed cash immediately, while the merchant knew that the guaranteed funds, plus interest, in time would be available in Amsterdam. He might also find it preferable to move his funds out of the war zone through the comparably safe method of a letter of credit rather than risking their loss in the aftermath of a battle or siege.[111]

Already in 1630 and 1631, the Swedes managed to establish a system that enabled funding for somewhat more than half of the costs of war to be raised in Germany, primarily from Pomerania. The rest had to be paid from state funds, raised in Sweden and Finland.[112] After the battle of Breitenfeld, the situation improved yet more, since new territories became available for supplies and contributions. The Swedish base territory reached from Pomerania through central Germany, between the Rivers Weser and Oder, all the way to Bohemia. There was also a zone of Swedish influence towards the south-west, to Würzburg, Frankfurt-am-Main, Mainz, and Strasbourg. Important supply depots were established in, among others, Mainz, Ulm, Augsburg, Windsheim, and Nuremberg.[113]

The territory under Swedish control was divided into supply regions. The first bridgehead in the north remained of central importance for the communication lines between the Swedish heartland and the field army in southern Germany. The northern supply region was delimited by Rivers Oder, Spree, Havel, and Elbe. In spring 1632, a new supply region was established between the Alps and Rivers Lech and Danube. Communication lines within each supply region, but also between the two supply regions, were established along the great rivers.[114]

Each regiment was accompanied by private merchants, sutlers, who sold food supplies and other goods to the soldiers. Although civilians and acting in a private capacity, they fulfilled an exceptionally important role in the overall logistics scheme and frequently were listed in the regimental muster rolls. They were also, at times, provided with horses and carts so as to ensure that they could carry out their function.[115]

---

[110] The amount of Muscovite financial support to the Swedish war effort remains debated but can, as a minimum, be described as significant. Porshnev, *Muscovy and Sweden*, pp.xiii-xiv.

[111] Englund, *Ofredsår*, pp.101–2.

[112] Ericson, *Krig och krigsmakt*, p.116.

[113] *Sveriges krig* vol. 5, p.314; Ericson Wolke, Larsson; and Villstrand, *Trettioåriga kriget*, p.266.

[114] Ericson Wolke, Larsson; and Villstrand, *Trettioåriga kriget*, pp.119–20.

Like in all contemporary armies, there were few facilities for medical treatment of the wounded beyond the barber-surgeons who from the outset were incorporated in the unit organisation. Yet, there were contingency plans for the treatment of wounded. A number of wounded or ill might be quartered separately from those fit for duty, in what was effectively a field hospital of sorts. If such facilities were unavailable, they might instead be quartered individually in the homes of peasants or burghers, or perhaps under the supervision of a garrison commandant. During treatment, the wounded continued to receive pay, and the Crown expected to provide for their board. In addition, hospitals existed, and it is known that they were used. Quite a number of fines called for in the Articles of War were designated as going to the funding of hospitals.[116]

There were few, if any, facilities for providing care to those who were crippled in action. A lucky few disabled veterans or their widows might receive accommodation in a royal castle or estate, or small cash grants with which to maintain themselves. Gustavus Adolphus was aware of the problem, which of course was not new.[117] Already in 1620, he proposed the establishment of homes and hospitals for disabled soldiers. The church was opposed, however, citing problems with disorderly behaviour among former soldiers, and a hospital for veterans was only established in the former nunnery in Vadstena in about 1640. Moreover, the Vadstena hospital could help no more than about 30 of those many veterans who had become grievously wounded in service.[118] One of the lucky ones who was taken into Vadstena, in 1656, had then served in the army for 37 years. Of his sons, six had fallen in battle while a seventh had suffered serious wounds in enemy captivity. When the veteran finally died in 1662, he left his widow behind.[119]

---

[115] *Kungl. Svea livgardes historia* 3:2, pp.560–2.

[116] *Ibid.*, pp.562–4.

[117] *Ibid.*, pp.564–6.

[118] Erik Petersson, *Vadstena krigsmanshus: En studie av den svenska kronans inrättning för sårade och gamla soldater cirka 1640–1780* (Linköping: Linköping University, 2017).

[119] Ericson and Sandstedt, *Fanornas folk*, p.31.

4

Weapons and Equipment

Armaments Industry

At the beginning of the reign of Gustavus Adolphus, Sweden had only rudimentary arms production facilities; there was only one arms factory, in the town of Arboga. Yet, under his rule arms factories of several kinds were established in Sweden so that all types of weapons could be produced from domestic resources. In this way, Sweden developed its own armaments industry, an endeavour that was fundamentally completed by 1630. The armaments industry consisted of a number of dedicated arms factories, which produced weapons for the state arsenals, for instance, a factory was established at Vira for the production of rapiers for the Swedish army. This was important, since basically every man in the army, whether officer or common soldier, carried a rapier. The flourishing arms industry enabled the infantry to be rearmed with more powerful matchlock muskets, and artillery technology to be gradually improved.

The establishment of an armaments industry, together with the conscription of a national army, resulted in an advantage as compared to those states on the Continent that relied on the wholesale enlistment of units by military entrepreneurs. The conscript system enabled the standardisation of weapons and equipment to a higher degree than when the services of a military entrepreneur was employed and already formed units of foreign soldiers were accepted into the army. For instance, on the Continent the pike was unpopular, since it was heavy and unwieldy. As a result, most enlisted units included, not by design but by default, far more musketeers than pikemen. It has been estimated that in Germany, the ratio of pike to shot at the beginning of the seventeenth century was 1:1, a ratio that by 1618 had changed to 1:2. In comparison, in 1621 the Dutch and Swedes followed ratios of 1:1.25 and 1:1.33, respectively.[1] Expressed differently, a Dutch or Swedish infantry unit operating in the field consisted of approximately 44 percent pike and 56 percent shot. As compared to Germany, where it was difficult to enlist willing pikemen, the Swedish model of conscription and armament of the men from state arsenals allowed the imposition of a higher ratio of pikemen to musketeers.

---

[1] Strictly speaking, the Dutch and Swedes ratios were 5.9:7.5 and 5.4:7.2, respectively. Barkman, *Gustaf II Adolfs regementsorganisation*, p.15.

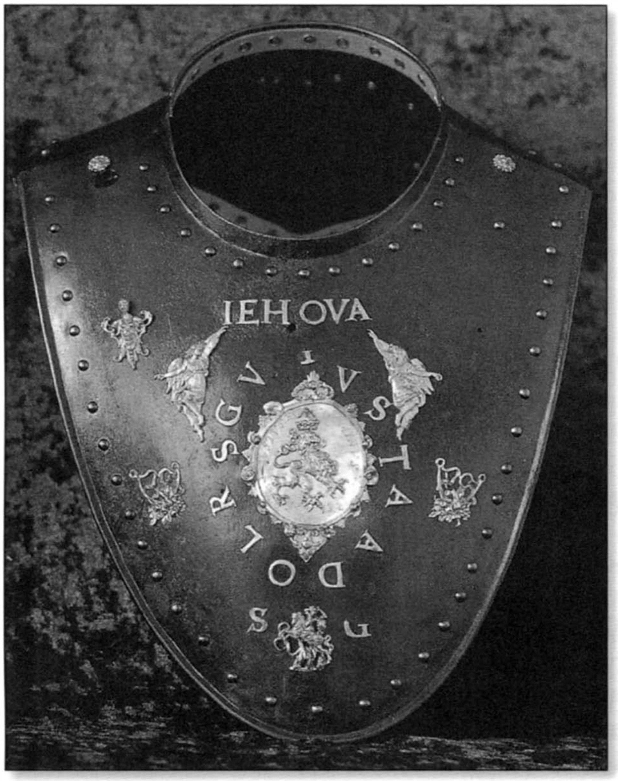
Gustavus Adolphus's heavy shot-proof siege helmet. (Royal Armoury, Stockholm)

The introduction of arms factories should not be interpreted as Sweden introducing or relying on unusual armaments. For sure, some types of weapons were substantially different from similar types elsewhere. An example was the Swedish experiments in leather cannons (more on which below). However, even leather cannons existed elsewhere, and most Swedish weapons, and much of the equipment, were little different from what was used in other European armies. For sure, Sweden made improvements in the production of, for instance, regimental cannons, but the successful types were soon copied by other European countries.

Besides, the Swedish demand for arms and military equipment during the war was far greater than the Swedish arms industry could sustain. In particular during the 1620s, large volumes of arms and armament were imported from Germany, in particular the financial centres of Hamburg and Lübeck, and the Dutch Republic. Most of the imports are believed to have been manufactured in Germany. Much was handled by the Dutch merchant Louis De Geer (1587–1652), who in 1627 moved to Sweden where he for a while acquired control over all of the Crown's arms factories (which in 1626 had been concentrated under what was known as the Iron Company, *Järnkompaniet*), the production lines of which he soon developed further. Henceforth, there was less need to import arms and armour. From November 1629 to the end of 1630, Louis De Geer delivered 19,828 muskets, all of which were manufactured in Sweden, in addition to 13,670 pikes and 4,700 complete sets of armour for cuirassiers. For the rest of the war, the annual Swedish production of muskets ranged from 15,000 to 20,000. In January 1631, capacity was sufficient for Gustavus Adolphus to order full armament for no less than 32 infantry regiments and 4 cavalry regiments (4,000 men) from Louis De Geer's Swedish factories, for delivery in time for the campaign season. But there was a downside to this. Soon quality suffered, the number of complaints increased until entire consignments were found to be faulty, and around a year later, the Crown had to resume control over the factories under the Iron Company.[2]

---

[2] Alm, *Blanka vapen*, pp.260–61; Josef Alm, *Eldhandvapen 1: Från deras tidigaste förekomst till slaglåsets allmänna införande.* (Stockholm: Rediviva, 1976), pp.181, 183; Herbert Langer, *Trettioåriga kriget* (np: Natur och Kultur, 2nd edn 1989; first published 1978 as *Hortus Bellicus*), p.167. I have corrected the 1631 order since the original only mentions cuirasses and weapons for 4,000 cavalrymen, not 4,000 cuirassiers and 4,000 light horse. See Hamilton, *Afhandling*, 117 n.215.



Siege gorget of Gustavus Adolphus. Black with later gold decorations, added in tribute of his death. (Staatliche Museen Heidecksburg, Rudolstadt).

Officers

Officers provided their own arms and armour. In battle, each officer would be armed with two wheellock pistols and a rapier. Infantry officers usually added a partisan, or in case of officers of pike units, perhaps a half-pike 5 cubits (2.97m) in length.[3] At the storm of Frankfurt-an-der-Oder in 1631, Colonel Monro recalled how 'Colonell Lumsdell and I, being both alike on the head of our owne Colours, he having a Partizan in his hand, and I a halfe Pike, with a head-piece, that covered my head, commanding our Pikes to advance, we lead on shoulder to shoulder'.[4] An officer was expected to wear both breast- and backplate, and during sieges and most battles, officers would protect themselves. However, as the war continued many cavalry officers discarded their heavy armour, retaining only the buff coat and gorget which in time became a symbol of rank. Infantry officers, whether of musketeers or pikemen, at first wore buff coats and at least a breastplate, but over time they, too, generally discarded the cuirass. A buff coat provided some measure of protection against at least sword cuts. However, it did not really protect against cold, and when wet, even from rain, it did not dry thoroughly for several days.

It is possible that some infantry officers, perhaps the company captains, early in the reign of Gustavus Adolphus each carried a round shield (Swedish: *rudass*, *rundass*, or *rundel*). Certainly such shields were distributed to the regiments in small numbers (apparently one per company), however, it is uncertain how they were used. Although originally intended for use on the battlefield, in the Spanish and Dutch manner, in the Swedish army they were since the reign of John III far more frequently used in siege warfare.[5]

Under-Officers

An under-officer, too, was armed with rapier and perhaps pistols. Those serving in the infantry would carry partisans, or sometimes a half-pike.[6] Unlike officers, under-officers in the Swedish army received their arms from the Crown. There were about six under-officers in each infantry company, and since the companies each received six partisans, it is reasonable to expect that these were carried by the under-officers. These partisans can be expected to have been simpler in style than those used by the officers; nonetheless, the cost of an under-officer's partisan was two Riksdalers, which equalled the value of a musket. Partisans were also carried on ceremonial occasions by guard units, including Gustavus Adolphus's (and later Queen Christina's and King Charles X Gustavus's) Drabant Guard.[7]

---

[3] Alm, *Blanka vapen*, p.143.

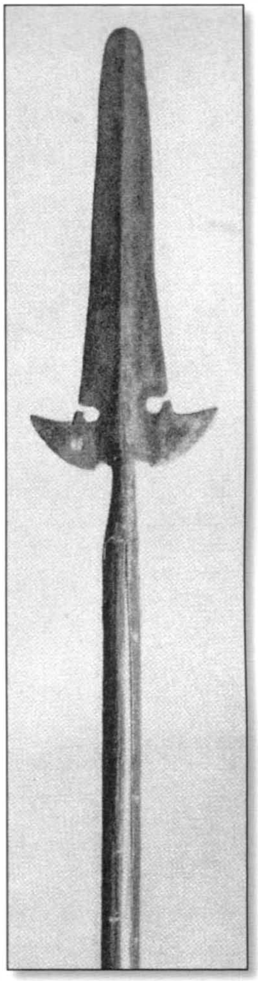
[4] Monro, *Monro His Expedition* vol. 2, p.33.

[5] Hamilton, *Afhandling*, p.119; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.115; *Kungl. Svea livgardes historia* vol. 2, p.212.

[6] Monro, *Monro His Expedition* vol. 2, p.203.

Partisans seem to have been long, according to some records 3.3m in length, of which the head accounted for 60cm.[8] Perhaps this was an atypical length, since this would make the partisan longer than a half-pike. If so, we can assume that a length of 2.1–2.8m, including a head some 30cm long, might be more typical.

In the early years of Gustavus Adolphus's reign, under-officers carried halberds. However, records show that from some point between 1616 and 1622, partisans were issued instead of halberds (an exact year cannot be determined since records for these years seem to be missing).[9] The older halberds remained in inventory for some years but seems not to have been distributed, except for 98 halberds which were distributed from the Elbing arsenal in 1630.[10] The halberd only returned into Swedish military use, again for under-officers, from the mid seventeenth century.



Partisan, c. 1620. (Army Museum, Stockholm)

Musketeers

At the beginning of Gustavus Adolphus's reign, most Swedish infantry were unarmoured arquebusiers. In Sweden, the infantry arquebus (*hake* or *rör*) was in most cases a 16-bore gun (that is, drilled for a bore size equivalent to a ball weighing one sixteenth of a pound, or expressed differently, equivalent to 16 balls per pound of lead, which corresponded to a nominal calibre of 16.8mm).[11] This weapon frequently came with a snaplock or snaphance lock and employed a fire-stone to strike fire. The fire-stone was often a flint, and the mechanism foreshadowed the later flintlock. The arquebus was not used with a fork rest. The significantly heavier and more powerful Dutch 10-bore matchlock musket (drilled for a ball weighing one tenth of a pound, corresponding to a nominal calibre of 19.7mm) was possibly first introduced to Sweden from the Dutch Republic in 1592.[12] These guns were used with a fork rest. When Gustavus Adolphus early in his reign modernised the armament of the Swedish army, he replaced the obsolete arquebus as the primary Swedish firearm with the matchlock musket. The musket's larger calibre gave it greater range and, more importantly, a somewhat increased penetrative power. Musket fire would penetrate the plate armour of heavy cavalry such as Polish hussars.

---

[7] Alm, *Blanka vapen*, pp.161–2.

[8] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.90.

[9] *Ibid.*, p.90.

[10] *Ibid.*, p.417.

[11] Alm, *Eldhandvapen* vol. 1, p.197.

[12] *Ibid.*, pp.152.

However, Gustavus Adolphus's rearmament project actually consisted of two components: the introduction of a new, more efficient barrel, eventually of a standardised calibre, and the move towards a standardised gun lock, for which Gustavus Adolphus chose the matchlock. The larger calibre of the musket barrel produced the increased range and penetration needed to confront armoured cavalry, and the introduction of what soon became a standard calibre facilitated logistics. The move towards a wholesale conversion to the matchlock brought yet other advantages, beyond the obvious one of standardisation, but to understand what Gustavus Adolphus probably had in mind, we have to examine the characteristics of the different types of gun locks.

The matchlock was in common use on the Continent, but it was an old design and not the most advanced type of gun lock. Many, perhaps even most, Swedish arquebusiers already used guns with matchlocks, but these were imported from the Continent and supplies were irregular. A further problem was that Sweden had a very limited manufacturing capacity for slow-match. On the other hand, Swedish gunsmiths were experienced in manufacturing wheellock and snaplock (snaphance) guns, which relied on gun locks that were more advanced than the imported matchlocks.[13] Some have even suggested that the snaplock was invented in Sweden, which is unknown but possible.[14] A wheellock works by spinning a spring-loaded steel wheel against a piece of pyrite to generate sparks, while in a snaplock, a spring-loaded cock strikes a flint against a piece of hardened steel (known as the frizzen) to generate a shower of sparks. In either case, the sparks ignite the gunpowder in the priming pan. In comparison, a matchlock is a simple mechanism which merely lowers a burning slow-match, held in a clamp at the end of a small curved lever (known as the serpentine), into the priming pan to ignite the gunpowder. Yet Gustavus Adolphus now set out to rearm his troops with muskets that employed the more primitive, imported matchlock instead of relying on the more advanced snaplock and wheellock, for which there already were domestic production facilities. So why did Gustavus Adolphus discard the more advanced lock types in favour of the simple matchlock?

A key advantage of the matchlock for the cash-strapped Swedish Crown was its low cost. A matchlock consisted of fewer parts and was accordingly cheaper to manufacture. Moreover, the matchlock was more robust as a military weapon. Its simplicity made it less liable to mechanical failures. In 1621, the influential military theorist Johann Jacobi von Wallhausen offered his views on the suitability of various types of locks, which probably corresponded to the opinion then commonly held by military officers, including, no doubt, Gustavus Adolphus.[15] Wallhausen argued that the advantage of shooting 'with a musket of the type that is used today' (the matchlock) was obvious, since:

---

[13] The wheellock was in seventeenth-century German known as *Züntschloss*. Another common term was *Feuerschloss* (firelock), which, however, might be used for any gunlock. The corresponding Swedish terms were then *sintlås* and *fyrlås*. The modern German term for wheellock is *Radschloss*.

[14] Josef Alm, *Arméns eldhandvapen förr och nu* (Stockholm: Kungl. Armémuseum, 1953), p.36.

> when such a contemporary musket has a glow on the slow-match, I can see with my own eyes that fire is guaranteed and that it is certain that one can shoot with the gun, while on the contrary, if I have to await the spark from the fire-stone, the action is doubtful and dangerous, and say what one wants about these locks, it is impossible to have them as reliable as the matchlock, since sometimes the fire-stone is too hard, the wheel too dull, the spring too lame; in these cases the gun will misfire, so for this reason I find that the contemporary matchlock is more useful and much better than those that employ a fire-stone.

Wallhausen went on to argue that although some claimed that the matchlock was inferior under conditions of rain, one could, in fact, keep the slow-match dry by carrying it under the jacket or buff coat. Moreover, the matchlock was more reliable during extended combat, since when suffering the stress of repeated use, the matchlock was less liable to misfire, while the fire-stone might break or fall out.[16] In short, the matchlock was a robust weapon system, unlike the more advanced, and correspondingly more expensive, newer lock designs.

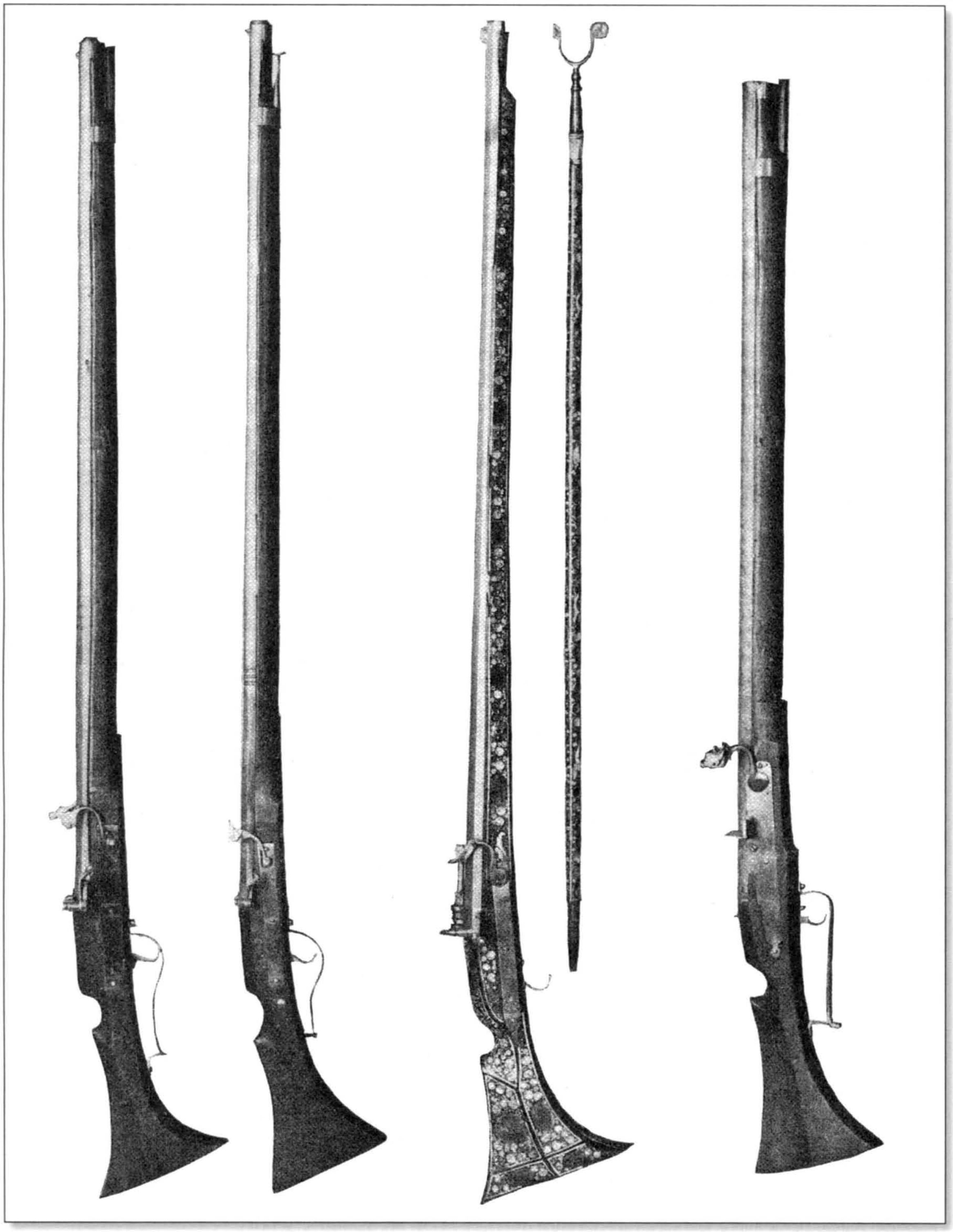
In the final calculation, it was probably the increased penetrative power of a heavier gun, together with the lower cost and general robustness of the matchlock, which sealed Gustavus Adolphus's choice. Other military men drew the same conclusion. Henceforth, the professional European armies rearmed with the matchlock musket. However, many irregulars did not. The more advanced locks permitted the user to keep the gun cocked and ready to fire, even if held concealed under one's clothes. They could be used under conditions of rain and darkness, without giving a telltale light and smell. Indeed, the former locks could be used to *light* a fire under camp conditions. All these characteristics made the snaphance and wheellocks popular with brigands, marauders, and others who did not operate in close formation under daylight battlefield conditions. This conclusion is obvious from several incidents related in the contemporary novel *Simplicius Simplicissimus* by the German writer Grimmelshausen, who participated in the Thirty Years' War.[17] Besides, the previous locks were not completely removed from the army inventory. For instance, a small number of snaphance muskets were

---

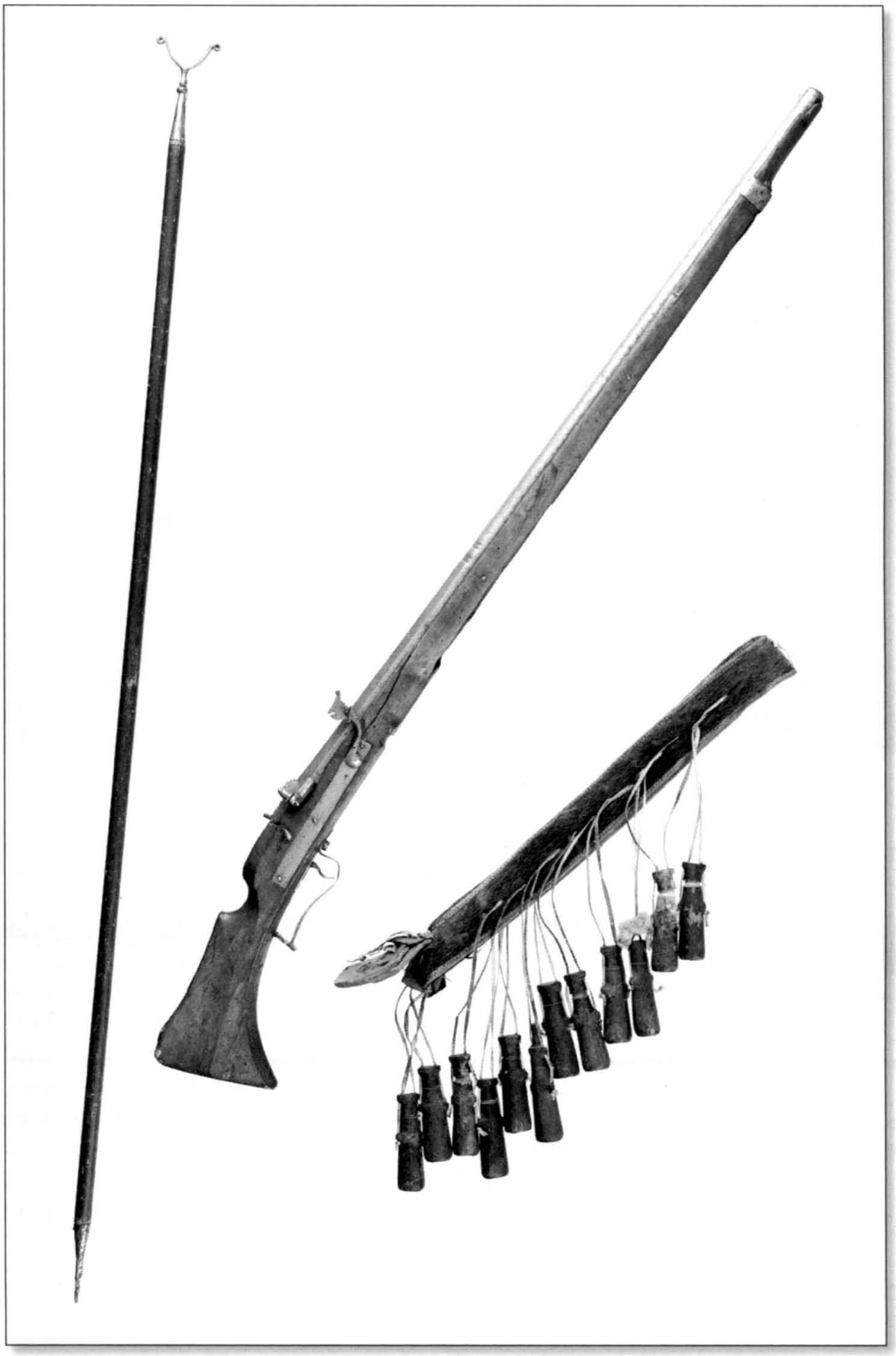
[15] Johann Jacobi von Wallhausen (*c*. 1580–1627) served first in the Dutch Republic and then went into the service of Danzig, where he advanced in rank and made a name for himself because of his comprehensive manuals of military science. In 1617, he became the head of John of Nassau's short-lived military academy in Siegen, which was the first institution of its kind in Europe. Wallhausen played a role in the development of the Dutch model of war; however, officers with more practical experience of war frequently regarded many of the formations that Wallhausen suggested in his manuals as unpractical and mere theoretical constructs.

[16] Johann Jacobi von Wallhausen, *Defensio patriae oder Landrettung* vol. 1 (Frankfurt-am-Main: Daniel Aubrij, David Aubrij, and Clement Schleichen, 1621), pp.54–55. My translation, which for reasons of readability is somewhat free.

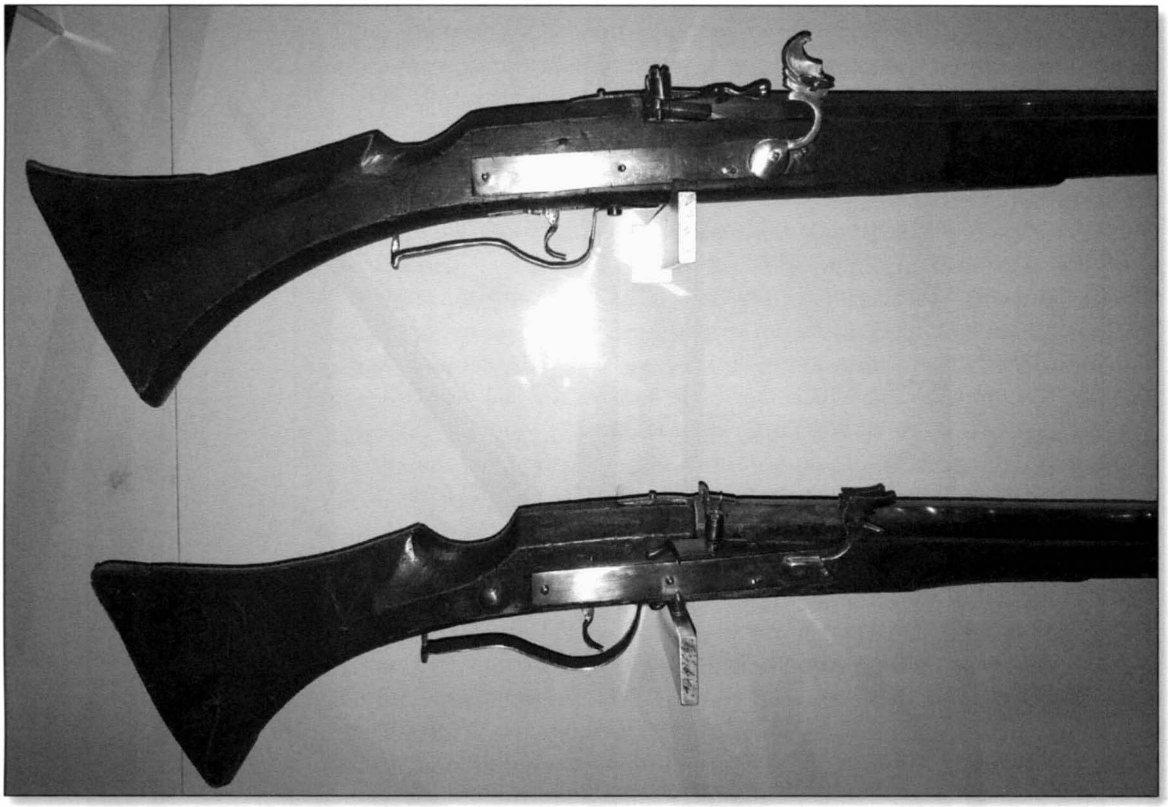
[17] Hans Jakob Cristoph von Grimmelshausen, *Der abenteuerliche Simplicissimus Teutsch* 2:16, 4:23, 4:24 (1669); Universal-Bibliothek edn published by Philipp Reclam, Stuttgart (1990), pp.199, 449–50, 454.



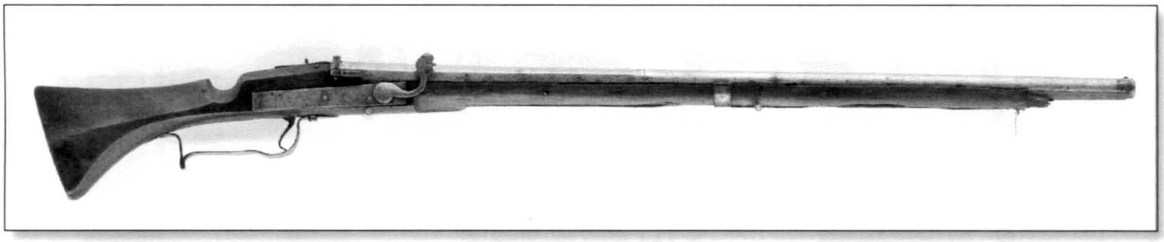
Muskets. From left to right: Dutch type, *c*. 1610; Dutch type, *c*. 1620; Dutch type, used by Gustavus Adolphus; copper musket, 1620s.



Matchlock musket, manufactured in Jönköping, *c.* 1625. Total length 143.0 cm, barrel length 106.8 cm, weight 4.85 kg, and calibre 20 mm. With fork rest and bandolier. This was the most common style of Swedish matchlock musket, although many were slightly longer. (Royal Armoury, Stockholm)

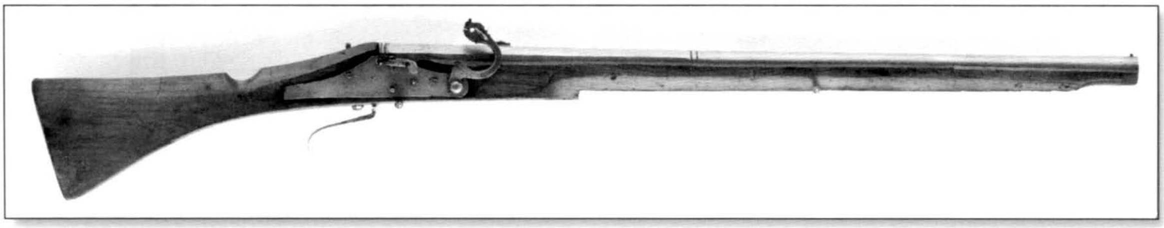


Matchlock muskets, 1620–1640. (Army Museum, Stockholm; Photo: Author)



Above: Matchlock musket, manufactured in Suhl, Germany, early seventeenth century. Total length 133.8cm, barrel length 98.0cm, weight 3.91 kg, and calibre 18mm. An earlier import, probably in use well into the Thirty Years'War despite its calibre. (Royal Armoury, Stockholm)

Below: Matchlock musket, seventeenth century. Total length 125.5cm, barrel length 86.4cm, weight 39.1 kg, and calibre 19mm. (Royal Armoury, Stockholm)



probably retained in each Swedish infantry company for special duties, such as night-time sorties.[18]

Rearmament

Yet, rearmament took time. It was particularly difficult to produce sufficient quantities of slow-match (match cord). Sweden experienced frequent shortages in the supply of slow-match, because of the limited domestic manufacturing capacity. The Swedish army estimated the daily consumption of slow-match as 2.7m per musketeer, which was a significant volume.[19] As a result, the number of matchlock muskets grew but slowly. Snaphance weapons continued to be manufactured, although when made for military use, they were henceforth more often 12-bore muskets, with a nominal calibre of 18.5mm. In some regiments, the old 16-bore arquebus remained in service into the 1620s. In 1612, new muskets had arrived which were used to arm the infantry from Dalecarlia and Västmanland. The rest of the infantry was instructed to use snaphance weapons, which must have meant either their old 16-bore arquebuses or newly made 12-bore muskets. In 1613, the Stockholm arsenal received 2,094 matchlock muskets but also 1,419 snaphance muskets.[20] As late as in 1618, only two thirds of the infantry in Herman Wrangel's Småland regiment could be supplied with proper muskets, and the remaining third had to continue using their old weapons.[21] Wrangel also expressed his displeasure with the 500 snaphance muskets that he had recently received.[22] In May 1621, Gustavus Adolphus ordered the infantry that remained in Sweden to hand over any already issued muskets to those who would be sent overseas to take part in the Livonian campaign, and then acquire guns on their own.[23] A year later, the Danish agent in Stockholm, Peder Galt, reported that the town only had three artisans who made slow-match, and the quality of their goods was appalling, which indeed led to talk that the snaphance was the better choice.[24] In February 1623, when there was a rumour that Denmark planned an attack on Kalmar, Gustavus Adolphus instructed the governor to mobilise the soldiers in the area. They were ordered to bring food supplies for two weeks and, if there was a shortage of slow-match, acquire locally-made guns with snaphance locks, since such weapons were easily available in southern Sweden where manufacture took place in the province of Småland. In the same year, those men of the Södermanland territorial regiment who were on garrison duty continued to use the old snaphance weapons, since there was a shortage of muskets, and Gustavus Adolphus reasoned that the old armament was equally good as the musket when defending a wall or redoubt. In 1625, snaphance weapons of the old style were again procured when pikemen were rearmed for shipboard duty.[25] The field regiments appear to have been fully rearmed with matchlock muskets only around 1627–1630. No more 12-bore muskets were procured after 1630.[26]

---

[18] Alm, *Eldhandvapen* vol. 1, p.192.

[19] Hedberg, *Kungl. Artilleriet*, p.78.

[20] Alm, *Eldhandvapen* vol. 1, pp.160, 163.

[21] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.13.

[22] Letter from Herman Wrangel to Axel Oxenstierna, dated 18 April 1618 (O.S.), *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 2:9 (Stockholm: P.A. Norstedt & Söner, 1898), p.5.

[23] Alm, *Eldhandvapen* vol. 1, p.160; citing a letter dated 12 May 1621 (O.S.).

[24] *Peder Galts depescher 1622–1624* (Stockholm: Historiska handlingar 26:1, 1920), p.26 (despatch dated 26 May 1622 (O.S.)).

Yet, due to the shortages in slow-match, soldiers on garrison duty were repeatedly ordered to use muskets with snaphance locks, not matchlocks. In 1635, large numbers of snaphance muskets were dispatched overseas to the fortresses of Riga, Narva, Ivangorod, and Kexholm. In 1644, the garrison of Elfsborg Castle was ordered to use snaphance muskets instead of matchlocks. These were some of the most important Swedish fortresses. Indeed, the existing supplies of snaphance muskets continued to be distributed to fortresses for many years to come, well after the end of the Thirty Years' War.[27]

The navy, too, used muskets with snaphance locks, since they were less likely than the matchlock muskets to cause fires aboard. Snaphance muskets were also distributed among levied peasants for territorial defence. For these reasons, snaphance muskets for military use, which by then probably meant 10-bore, remained in production until very late, although in smaller numbers. For instance, the Swedish gun factory in Söderhamn from September 1635 to September 1636 delivered to the Crown 4,393 matchlock muskets and 369 snaphance muskets. In 1638, the Stockholm arsenal received 10,026 new matchlock muskets and 141 new snaphance muskets.[28]

Following rearmament, all Swedish military muskets were manufactured in the Dutch style. Large numbers were also imported from the Dutch Republic, often through the aforementioned Louis De Geer.[29] Attempts were early made to standardise the types of muskets issued to the troops. In 1613, for instance, Gustavus Adolphus decreed a barrel length of 135.55cm.[30] It was believed that longer barrels resulted in greater penetration. Such a length was exceptional, however. A musket preserved in the Army Museum, Stockholm, estimated to derive from the period 1610–1615, has a barrel length of 114cm and a total length of 152.5cm. With a calibre of 19.1mm, the musket's total weight is 6.4kg.[31] Almost every army matchlock musket was accordingly issued with a fork rest, which was approximately 1.2–1.3m long and usually made of ash.[32]

From the 1620s onwards, muskets, regardless of lock type, again grew slightly longer but also lighter in weight. What apparently was referred to as the 'new pattern' of muskets was introduced in 1624.[33] These muskets generally had a total length of 155–159cm, of which the barrel accounted for 115–119cm (nominally 118.8cm). With a calibre of 19.9–20.1mm, total weight ranged from 4.1 to 5kg, but most seems to have been around 4.5–4.75kg.[34] Snaphance muskets were slightly heavier, but they were still no more than some 5kg in weight. Since the musket had grown lighter, it can be argued that a fork rest no longer was necessary. After all, the flintlock muskets of later centuries, which were never used with fork rest, in most cases were actually heavier (for instance, the standard Swedish infantry musket of model year 1815 had a total weight of 4.94kg).[35] However, the recoil from a seventeenth-century musket was significant, and the fork rest presumably helped by taking some of this force, which otherwise might physically harm the soldier, something which is attested to even in late seventeenth-century documents.[36] Having said this, both contemporary illustrations and texts frequently note Swedish musketeers without fork rests.

---

[25] Hamilton, *Afhandling*, 114;Alm, *Eldhandvapen* vol. 1, pp.160, 161.

[26] Alm, *Arméns eldhandvapen*, pp.91–3.

[27] Alm, *Arméns eldhandvapen*, pp.111–12.

[28] Alm, *Eldhandvapen* vol. 1, pp.168, 192.

[29] *Ibid.*, pp.179–81.

[30] Hamilton, *Afhandling*, p.115; Alm, *Eldhandvapen* vol. 1, p.164; Alm, *Arméns eldhandvapen*, p.91; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.94.

[31] Alm, *Eldhandvapen* vol. 1, pp.165–6; Alm, *Arméns eldhandvapen*, pp.327–8.

[32] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.98.

[33] Hedberg, *Kungl. Artilleriet*, p.80.

From the early 1620s, Swedish infantry muskets intended for the field regiments were, following the Dutch style, 10-bore. This calibre, which eventually was standardised as 20mm, remained in use for Swedish military muskets until 1811.[37]

When properly manufactured, the musket was a sturdy weapon. Many soldiers loaded their weapons with excessively strong charges of gunpowder. This gave the musket ball a high velocity and produced grievous wounds. Moreover, it was common to load the musket with multiple and often irregular projectiles, which might explain why during the war so many men and officers suffered from multiple wounds when they were shot. Incidentally, wheellock pistols, too, might be loaded in this manner. Some individual soldiers may have modified the balls to make them more lethal. A small number of such parted balls have been found on the battlefield of Lützen.[38]

Infantry muskets were sturdily made with iron, not brass, fittings. As in Germany, musket stocks were 'white' (German: *weissgeschäftet*) which meant that they consisted of natural wood, which was neither painted nor treated in any way (in Germany, unlike Sweden, one could also find muskets with black-painted stocks, and it remains likely that some were issued to Swedish troops while in Germany).[39]

Musketeers armed with matchlocks would wear a leather bandolier slung over the left shoulder holding a powder horn and 12 or more wooden flasks for gunpowder (each with enough powder for a single shot). However, archaeological evidence from the Swedish warship *Wasa*, which was lost in 1628, indicates that paper cartridges then were already in common use, each containing a measured charge of gunpowder, and that lead balls with a calibre of 11.5mm for pistols retained the sprue that resulted from the channel in which molten metal had been poured into the mould when cast. The sprue was probably retained since it could be tied to the paper cartridge, in effect anchoring the ball within the paper cartridge. A ball with sprue

---

[34] Alm, *Eldhandvapen* vol. 1, pp. 166–8; Alm, *Arméns eldhandvapen*, p.91.

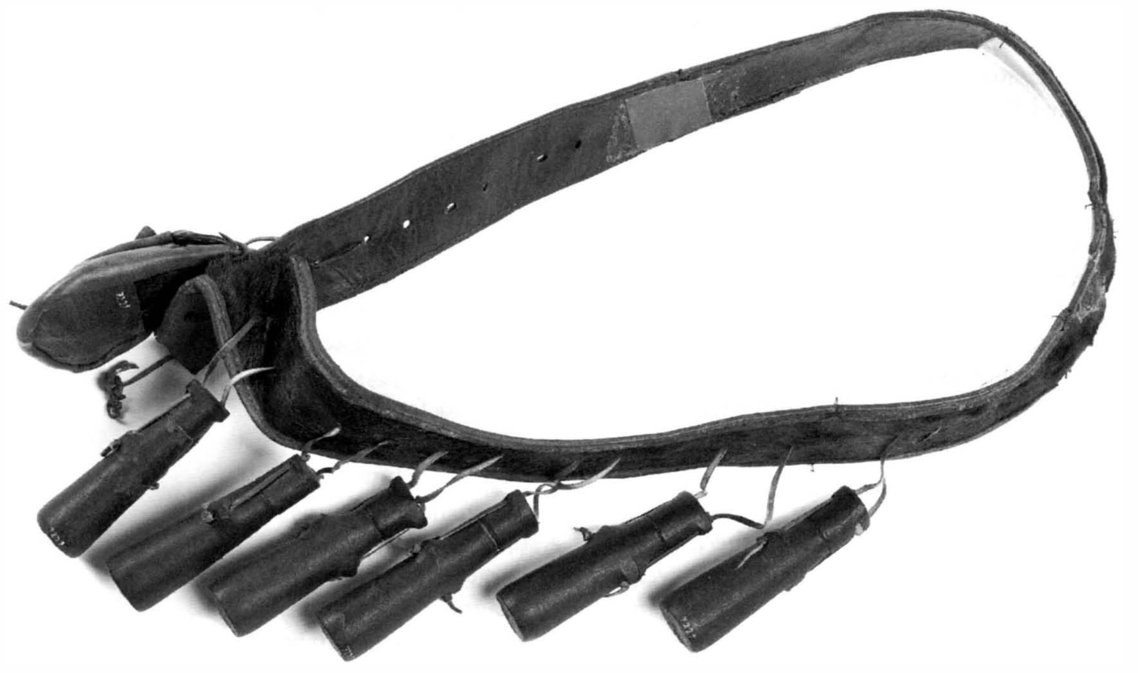
[35] Alm, *Arméns eldhandvapen*, p.328.

[36] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.98 n.1.

[37] Alm, *Eldhandvapen* vol.1, p.164; Alm, *Arméns eldhandvapen*, p.92.

[38] Schürger, *Archaeology*, p.186.

[39] Alm, *Eldhandvapen* vol. 1, p.168.



Bandolier of brown leather covered with black-haired seal-skin, with attachments for 12 wooden flasks for gunpowder (some now missing) and an ammunition pouch, 1625–1650. The bandolier has a length of 120cm and a width of 5.9cm. Each flask is covered in black leather and 11.5cm long. The ammunition pouch is approximately 13.0 x 9.3cm and made of brown leather with black-haired skin on the rear side. (Skokloster Castle)

could also be expected to cause a more devastating wound.[40] Balls with sprues have been found on the battlefield of Lützen as well, although most have been identified as pistol or carbine balls used by cavalry. Still, a few have been attributed to infantry muskets.[41] Yet, sprues were not necessary to prepare a paper cartridge, and it remains likely that some musketeers, too, adopted paper cartridges during the war. If so, however, they appear to have been a minority. Most infantry no doubt loaded their muskets in the old way, without pre-made paper cartridges.

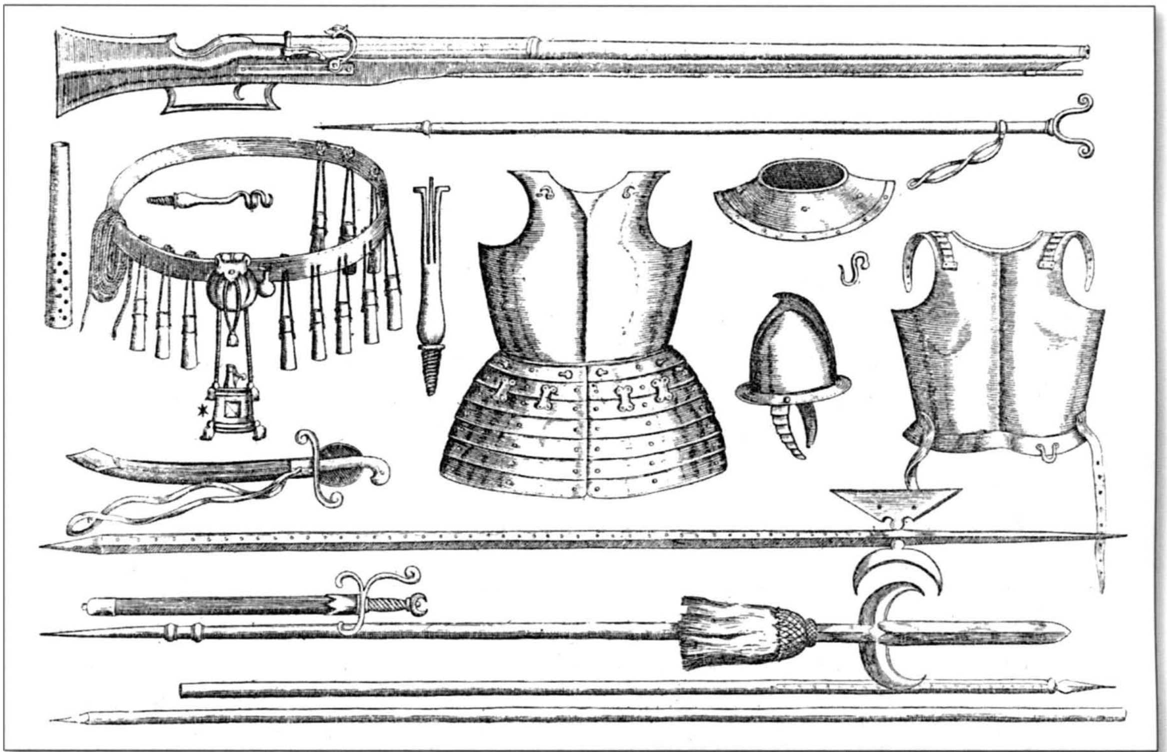
Although the army embraced the matchlock, and it usually worked well enough on the battlefield, there were technical shortcomings that proved impossible to overcome. Perhaps chief among them was that matchlock-armed infantry was vulnerable to cavalry charges while on the march. They were also vulnerable while in camp, in case of a surprise attack. The match cord was slow to light. And when lit, it still burned quicker than desired (about 10–15cm per hour). For these reasons, the army settled on a compromise. On the march, only every tenth soldier kept their match cord alight. Of course, this still meant that the majority remained vulnerable to sudden attacks. During his campaigns in the Commonwealth, Gustavus Adolphus found himself having to recruit archers to protect the infantry while on the march. Gustavus Adolphus raised Finnish archers at least in 1627 and almost certainly previously as well.[42] Since both Finns and Lapps

---

[40] Edward Hamilton and Anders Sandström, *Sjöstrid på Wasas tid: Taktik, artilleri och handeldvapen* (Stockholm: Sjöhistoriska museet, Wasastudier 9, 1982), p.88.

[41] Schürger, *Archaeology*, pp.179–81.

[42] Hamilton, *Afhandling*, p.123; Frost, *Northern Wars*, p.108.



Infantry weapons and equipment. Left: Slow-match cover, bandolier with bandolier measure, priming flask, ammunition pouch, spare slow-match, and cleaning tool. Not to scale. (Wallhausen, KriegskunstzuFuß)

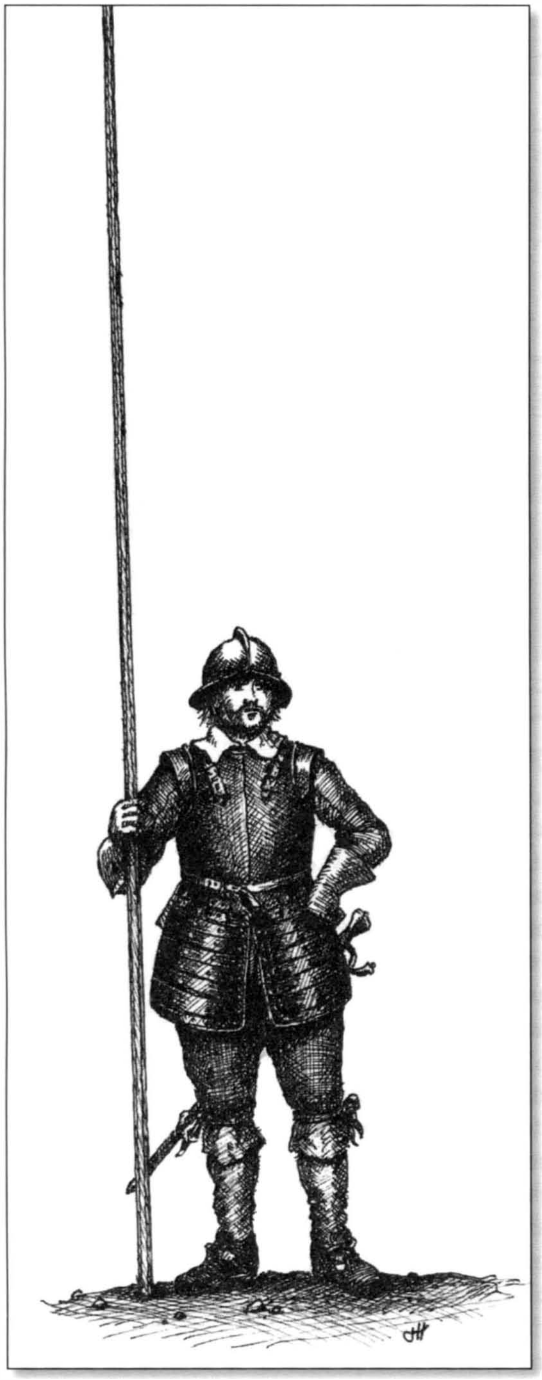
(Sami from northern Scandinavia) were known as excellent bowmen, and both groups were popularly believed to use magic, this may have been the foundation for the recurring myths of Gustavus Adolphus employing such exotic troops in his army in Germany. In camp, burning slow-match was distributed at central locations so that the musketeers could hurry there to light their own slow-match rapidly when the alarm was sounded.[43] Besides, in addition to his main weapon, each infantryman carried a rapier, or as will be shown, an axe as a sidearm.

The Swedish army in the first half of the seventeenth century also used sharpshooters, armed with special long guns resembling fowling pieces, which were used for individual fire. Such long-barrelled, fine-calibre rifled guns were known as Småland guns, after the province in which many of them were made. Since the sixteenth century they had been used as sniper rifles by a small number of skilled marksmen. It is unknown when the practice ended; however, sharpshooters of this type existed in the Swedish army at least during the early seventeenth century and possibly throughout the Thirty Years' War.[44]

---

[43] Alm, *Eldhandvapen* vol. 1, pp.192–3.

[44] *Ibid.*, p.151.



Swedish pikeman.
(Tommy Hellman)

Pikemen

Those infantrymen who did not carry muskets were armed with pikes. By tradition, a pikeman was valued higher than a musketeer. However, the task of carrying a pike and the associated armour had long been unpopular with the men. Monro complained that soldiers often would 'cut off the lengths of their Pikes, as often is seene upon marches' when they were tired of carrying their weapons.[45]

Nonetheless, Gustavus Adolphus was quick to increase the number of pikemen in the army. In 1612, he appointed a special pike manufacturer, who was ordered to make 'as many pikes as were needed or he could manage'.[46] In 1613, he ordered every peasant in Stockholm and Uppsala counties to deliver 2–3 pike shafts. Similar instructions followed elsewhere, and in later years as well. Ash wood was recommended, but pine was acceptable, the instruction clarified. In 1613, the pikes were required to be 10 cubits (5.94m) long. It was generally held that pikes had to be longer than the long lances employed by Polish hussars for infantry successfully to withstand a Polish cavalry charge. However, in 1616 the regulation length was decreased to nine cubits (5.35m), which corresponded to Continental practices and henceforth remained the standard Swedish pike length. Based on surviving seventeenth-century pikes in the Royal Armoury, Stockholm, and Skokloster Castle, the pike-head was made of hard steel, about 10–14cm in length (longer if the socket was included), and four-sided in shape. The pike shaft had a diameter of about 3–3.75cm and was from the head downwards strengthened by two iron reinforcements, 50–70cm in length.[47] Pike shafts were of maple or ash, although, as noted, pine and eventually aspen were acceptable, too.[48] The pike shafts may have been painted black, since this seems to have been a common practice in Germany and, based on the surviving pikes, which of course may have been painted later, apparently in Sweden, too.

The pike was exclusively a battlefield weapon. Most garrison regiments only carried muskets. In fact, when a pike-armed unit was deployed to garrison a town or fortress,

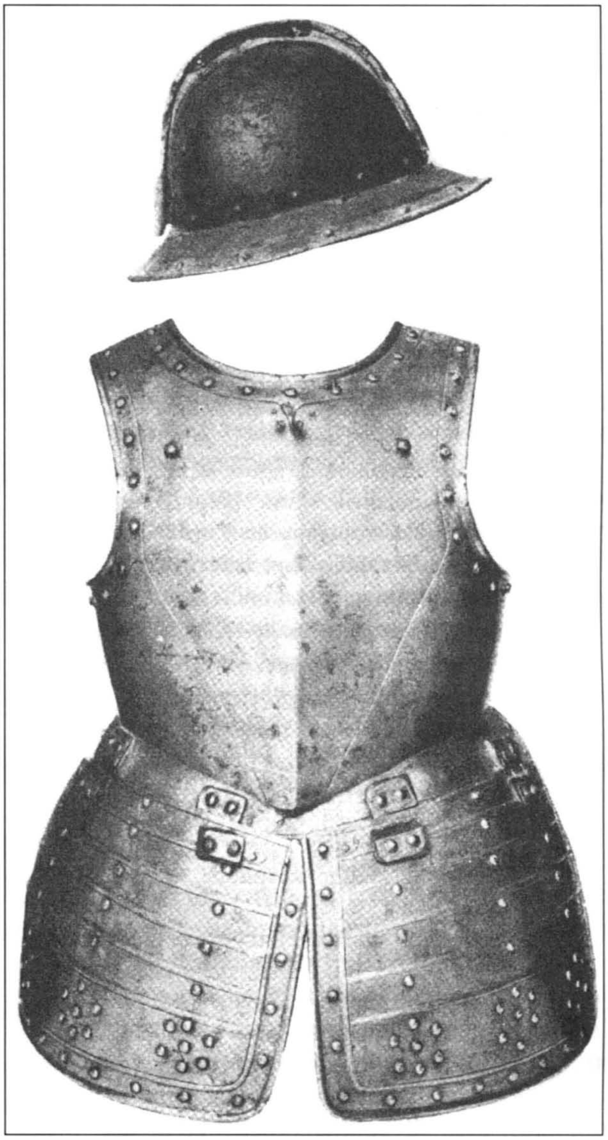
---

[45] Monro, *Monro His Expedition* vol. 2, p.191.

[46] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 1, pp.413–14.

[47] Alm, *Blanka vapen*, pp.140–41.

[48] Hamilton, *Afhandling*, p.122.



Pikeman armour, 1600–1630. (Royal Armoury, Stockholm)

standard practice was to supply the pikemen with muskets instead of pikes. The commandant would be ordered to store the pikes until the unit again was ordered into the field.[49] Likewise, for obvious reasons pikes were not used when troops were sent out to forage, or for the small war. Pikemen who were deployed for shipboard duty were also rearmed, this time with guns with snaphance locks.[50]

Each pikeman carried a rapier as a sidearm. In the early years of the reign of Gustavus Adolphus, pikemen in some regiments might be armed with an axe instead of rapier. For instance, in late 1611 an order was issued to supply some soldiers with axes instead of rapiers.[51] Whether this was the result of a shortage of rapiers, perhaps the most likely explanation, or an expected need for fortification tools remains unknown. Swedish troops in Prussia were reported to have carried axes instead of rapiers as late as 1628.[52]

During the Thirty Years' War, the share of pikemen in the infantry generally fell, and the musket-armed infantryman assumed the prominence earlier gained by the pikeman. Sweden retained a belief in the pike as an offensive weapon. However, as the war progressed, the share of pikemen fell in Swedish armies, too. By the time of the battle of Lützen, despite the intentions of Gustavus Adolphus, the actual pike strength of the Swedish field army was more than 35 percent below establishment strength.[53] The ratio of pikemen and musketeers then was about 1:2.45, which was essentially the same as in most infantry field units in Germany. Expressed differently, the average Swedish infantry unit operating in the field by then consisted of approximately 29 percent pike and 71 percent shot. Many weak regiments had no pikemen at all. James Turner (1615–*c.*1686), a Scotsman in Swedish service who arrived in 1632 but never met Gustavus Adolphus, later wrote that:

---

[49] Alm, *Blanka vapen*, p.142; citing a letter dated 28 July 1630 (O.S.) to Lars Kagg, the commandant in Anklam.

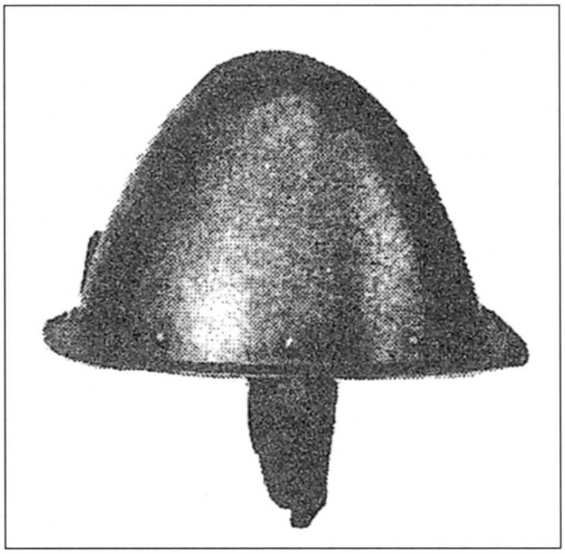
[50] Alm, *Eldhandvapen* vol. 1, p.161.

[51] Hamilton, *Afhandling*, p.121.

[52] Hoppe, *Geschichte*, p.288.

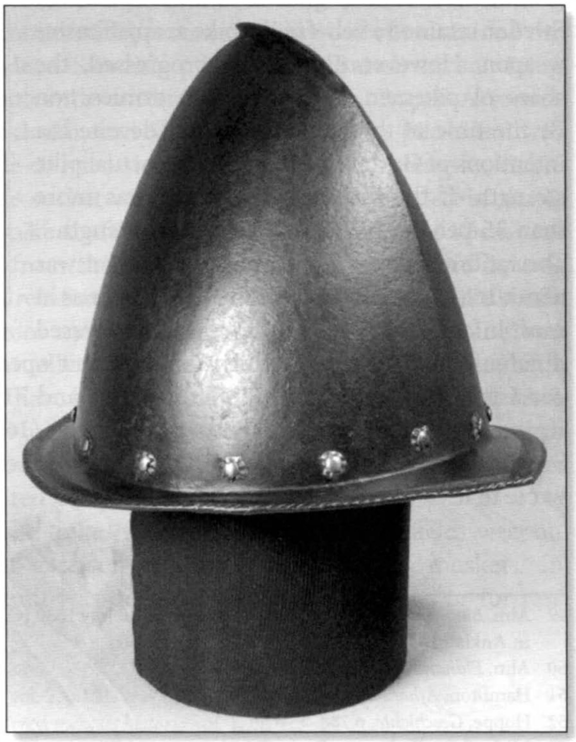
[53] Michael Fredholm von Essen, 'Musketeers and Pikemen in the Swedish Army at Lützen, 1632', *Arquebusier* 24: 2 (1998), pp.31–33; which is based on *Sveriges krig* 6, app. 6.

> after his [Gustavus Adolphus's] Victory at Leipsick [Breitenfeld] over the Imperial forces under Tily, the Kings Marches were so quick in pursuance of his successes, which followed one on the heels of another, and the retreats also of other Armies from him, were so speedy, that first the Pikemans defensive Arms were cast away, and after them the Pike itself, insomuch that all who hereafter were levied and enrolled, called for Muskets. But notwithstanding this, when new Regiments were levied after that great Kings death, Colonels and Captains were ever order'd to levy and arm Pikemen proportionably to the Musquetiers; yet after they had endur'd some fatigue, the Pike was again cast away, and no Soldiers but Musquetiers were to be seen. Whether this was done by the supine negligence of the Officers, especially the Colonels, or for the contempt they had of the Pike, I know not. But I am sure that for some years together I have seen many weak Regiments composed meerly of Musquetiers without one Pikeman in any of them, and surely they were so much the weaker for that.[54]



Above: Infantry helmet, 1600–1630. (Army Museum, Stockholm)

Below: Pikeman's cabasset, 1600–1630. From Denmark, although identical types were used in Sweden. (Army Museum, Stockholm)



Infantry Armour

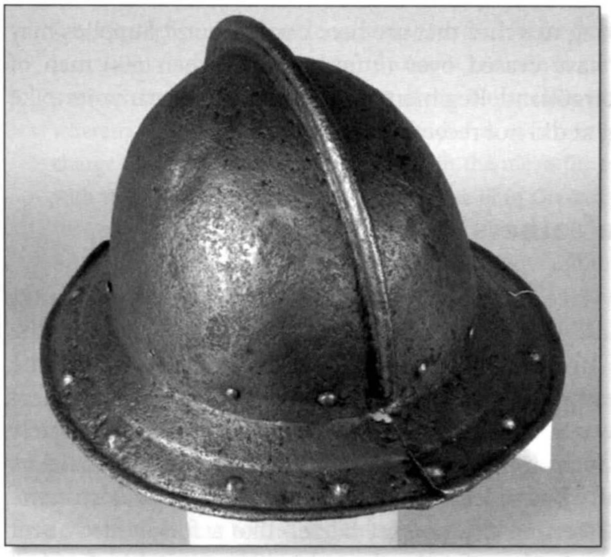
In the early years of Gustavus Adolphus's reign, a Swedish musketeer would wear a cuirass, consisting of both breastplate and backplate, and a helmet, commonly of the cabasset type (in Scandinavia often referred as a pear helmet, because of its pear-, some say almond-shaped, top with a small point). When not in use, the helmet might hang from a hook on the bandolier. In battle, the musketeer would don the helmet and instead hang his hat from the hook. Inside the helmet, the soldier wore padding made of flax or, for those officers who could afford it, cotton.[55] Corporals wore gorgets as a symbol of rank.[56]

---

[54] Sir James Turner, *Pallas Armata: Military Essayes of the Ancient Grecian, Roman, and Modern Art of War, Written in the Years 1670 and 1671* (London: Richard Chiswell, 1683), p.177.

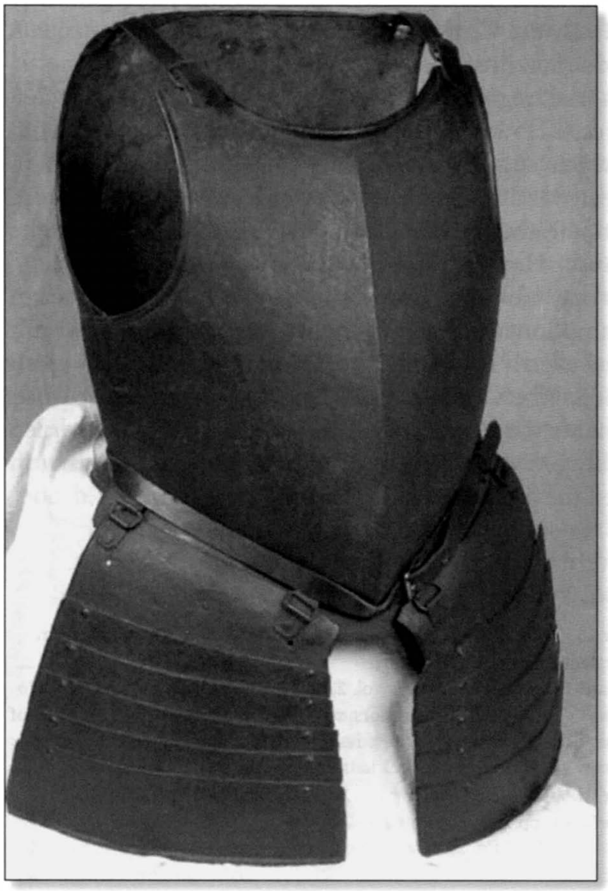
[55] Alm, *Blanka vapen*, p.253; citing Wallhausen, *Kriegskunst zu Fuß*.

[56] Evident from the 1626 painting of the Norrland Territorial Regiment by Nicolas de la Fage, Karlberg Palace.



Above: Infantry helmet of the mass produced, Dutch type, 1620–1660. From Vadstena Castle. (Army Museum, Stockholm)

Below: Pikeman's armour, 1600–1630. From Denmark, although identical types were used in Sweden. (Army Museum, Stockholm)



However, during war conditions many musketeers discarded the cuirass, since it was too heavy and cumbersome. Likewise, many musketeers got rid of their helmets, too. Instead a wide-brimmed grey felt hat became the common headgear. Possibly, a reinforced iron skull-cap (some called it a 'secret') was added underneath the hat's crown, so at least to protect from a slashing sabre.

The situation was different for the pikemen. Gustavus Adolphus emphasised the need for pikemen to wear a full set of armour consisting of cabasset helmet, gorget, cuirass consisting of both breastplate and backplate, and tassets to protect the upper thighs. Each tasset was manufactured as one piece to save money, even though it was designed to look, from a distance, as if it was made of several lames, that is, overlapping plates of metal forming a flexible defence, as in the style of more expensive armour. Moreover, the common armour for a pikeman was not shot-proof. No shot-proof pikeman's armour is preserved in either the Army Museum or the Royal Armoury, Stockholm, nor is any such armour used by Swedish common pikemen known to be preserved elsewhere.

However, even these cost-saving measures were not enough. Because of the persistent lack of funding, it was not always possible to supply armour to all pikemen. In 1624, for instance, most of the pikemen in Johan Banér's Östergötland Regiment still lacked armour, and many also lacked helmets.[57]

Besides, as we have seen, many pikeman discarded the cuirass during the war. After the death of Gustavus Adolphus, this was eventually acknowledged by the Crown. In 1635, Axel Oxenstierna requested the government in Stockholm not to send any more cuirasses to the infantry, or for that matter, the cavalry. He explained that 'there is no need to send here any cuirass or helmets for either horse or foot, since they are little used, and mostly discarded because of the long marches that are here carried out.'[58] Supplies may indeed have ceased over time. In 1647, when 600 men of the Östergötland Regiment were sent to Germany, its pike contingent did not receive cuirasses.[59]

---

[57] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.47.

Pikeman's helmet, seventeenth century. (Skokloster Castle)

Swinefeathers

In the face of cavalry charges, the Swedish infantry customarily dug in, preparing fieldworks. During the war in Livonia and Prussia, Swedish musketeers used the swinefeather (elsewhere also known as the Swedish feather), which was a short pike, with a total length of approximately 1.8–2m including the 30cm-long head. The swinefeather could be used as protection against cavalry but, at least in the later years of the war, also came with an attachment for resting the musket barrel, like a fork rest. A unit of musketeers with swinefeathers firmly planted in the ground in front of them would give the appearance of a wall of spear points. Moreover, with the addition of logs to link them together, several swinefeathers could be arranged into a *cheval-de-frise*, an anti-cavalry obstacle that was positioned in front of the infantry ranks so as to provide protection against a cavalry charge. Swinefeathers were manufactured in large quantities and generally delivered in pairs. In 1621, the Crown ordered the manufacture of 16,000 swinefeathers, and production increased in the following years.[60]

In 1623, one territorial regiment counted 1,296 pikemen and 1,728 musketeers with fork rests. However, the regiment was also equipped with 1,728 swinefeathers, which suggest that if called up, each musketeer in addition to his other gear was also supposed to carry a swinefeather.[61] From 1624, if not before, swinefeathers were always distributed together in the same numbers as fork rests. However, not all regiments received them.[62]

Gustavus Adolphus may have abandoned the use of the swinefeather in 1628.[63] The general assumption is that they were used in the Commonwealth but not in Germany. However, if so, they were reintroduced into the Swedish army no later than 1663, when deliveries of swinefeathers from Swedish arms factories to regiments were again recorded.[64] Swinefeathers were also noted by Turner. Possibly based on his experiences in the Swedish army in 1632–1633, he described the swinefeather in almost lyrical terms:

---

[58] Letter dated 31 December 1635 (O.S.), *Rikskansleren Axel Oxenstiernas skrifter och brevväxling* 1:14 (Stockholm: P.A. Norstedt & Söner, 1950), p.391.

[59] Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.274.

[60] *Kungl. Svea livgardes historia* 3:1, p.762. The authors revise and update previous figures of swinefeathers. On the use of swinefeathers as fork rests, see Brzezinski, *Army of Gustavus Adolphus* vol. 1, p.19.

[61] Alm, *Blanka vapen*, p.142; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.112 n.1.

[62] *Kungl. Svea livgardes historia* 3:1, pp.762–4.

[63] *Ibid.*, p.405.

[64] Alm, *Blanka vapen*, p.146.

> It is a Stake five or six foot long, and about four finger thick, with a piece of sharp Iron nail'd to each end of it; by the one it is made fast in the ground in such a manner that the other end lyeth out so that it may meet with the breast of a Horse, whereby a Body of Musketeers is defended as with a Pallisado, against the rude charge of a Squadron of Horse, which in the mean time they gall and disorder with their shot. I have seen them made use of in *Germany*, and before I left that War, saw them likewise worn out of use. When the Infantry by several Regiments or Brigades are drawn up in Battel, and the Pikes and those Stakes fixed in the ground, they make a delightful show, representing a Wood, the Pikes resembling the tall trees, and the Stakes the shrubs.[65]

It was previously suggested that swinefeathers were retained, but that in Germany the musketeers no longer carried them, instead transporting them in the supply train to be brought out only when field fortifications would be constructed.[66] Possibly this is what happened, since it would be logical again to issue swinefeathers to individual musketeers in peacetime, when there was no field army with supply train to carry them.

Harquebusiers

At the beginning of the seventeenth century, most Swedish cavalry served as unarmoured harquebusiers. Each carried a fine-calibre arquebus or carbine as primary armament, a rapier, and one or two wheellock pistols. Some may have worn a helmet, gorget, breastplate, or even a backplate, but they were in the minority.[67]

The cavalry arquebus usually came with a wheellock, although a few snaphances were used as well. The cavalry arquebus was hung from a swivel attached to a bandolier across the left shoulder. It could be fired without unhooking from the bandolier. For this reason, the weapon was in Sweden referred to as a 'bandolier arquebus' (*bantlärhake*). In the first quarter of the seventeenth century, the bandolier arquebus was commonly around 1.2m long and had a calibre of around 16.8mm. On the left side of the gunlock, a fairly large leather flap was screwed in place which could be folded over the gunlock to protect it. On his right side, the harquebusier carried a special leather strap from his belt with a powder-horn, priming flask, ammunition pouch, and wheellock spanner.[68]

Strictly speaking, the harquebusiers were already then in the process of replacing the obsolete arquebus with the carbine. As far as is known, carbines were first introduced to Sweden in 1600, when 100 such weapons

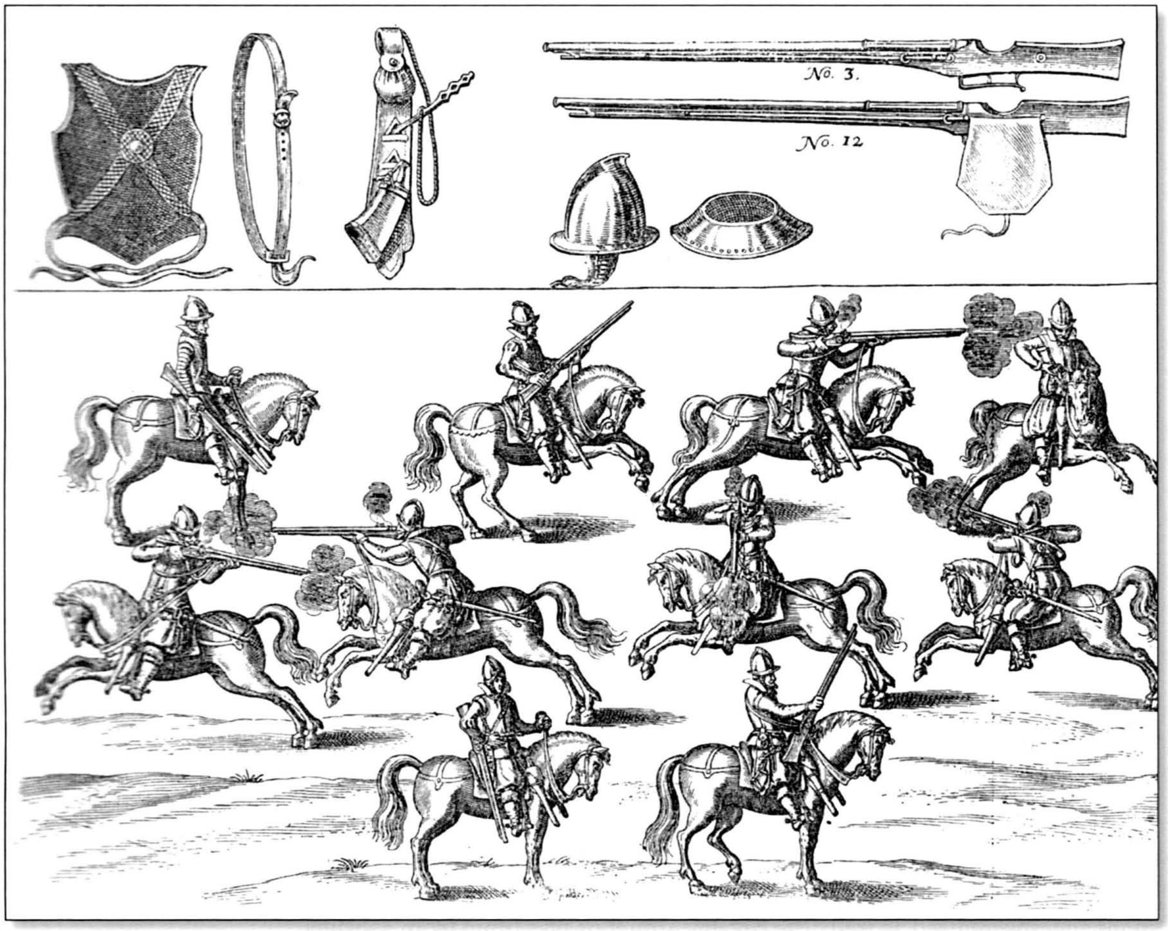
---

[65] Turner, *Pallas Armata*, pp.169–70.

[66] Hamilton, *Afhandling*, p.117; citing Chemnitz, *Königlichen Schwedischen* vol. 1, p.48, who here refers to *pinpalisaden* which possibly but not necessarily implies swinefeathers used as field fortifications. It should be noted that Chemnitz specifically mentions swinefeathers only once (*Ibid.*, p.475) and then as a Swedish innovation which was used, with great effect, during the war in the Commonwealth but not in Germany.

[67] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.116.

[68] Alm, *Eldhandvapen* vol. 1, pp.196–7.



Harquebusier weapons and equipment. Breastplaste, bandolier with arquebus hook, leather strap with ammunition pouch, wheellock spanner, gunpowder flasks; arquebuses, one with lock cover; helmet, gorget. (Wallhausen, Kriegskunst zu Pferdt)

were ordered from Copenhagen. They were to have a barrel length of about 0.7m.[69] Based on later examples, total length was probably similar to the arquebus or possibly slightly shorter. A carbine, like the musket which was also introduced around this time, had a larger calibre than the obsolete arquebus. The wheellock remained in common use among horsemen.

The practice of firing the gun without unhooking from the bandolier was discontinued with the introduction of carbines. Instead, during the early years of Gustavus Adolphus, the carbine was carried in a saddle holster. Likewise, the harquebusier's belt strap for equipment was in most cases discarded early in the century. Instead the men would carry powder-horn, priming flask, ammunition pouch, and wheellock spanner on the outside of the saddle holster.[70]

As far as is known, harquebusiers only remained in the Swedish army until 1621, after which they were not heard of again (except in the occasional, recently enlisted German unit). At that time, Gustavus Adolphus abolished the carbines for all horse as part of introducing a new tactical doctrine for the cavalry (more on which below).[71] For the 1622 campaign season, there was a plan to enlist 1,000 German cavalry, for which arquebuses or, more likely, carbines would be provided.[72] It remains unclear if the plan was carried out. For Swedish cavalry, two-handed firearms were certainly only reintroduced long after the death of Gustavus Adolphus.

---

[69] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.9.

[70] Alm, *Eldhandvapen* vol. 1, pp.121, 154, 196, 213; Alm, *Arméns eldhandvapen*, pp.121–2.

From 1621, any light horse who remained unarmoured had to adopt at least some protection. Henceforth, the former harquebusiers would serve with helmet, breast- and backplate, a pair of pistols, and a rapier.[73] They rapidly became undistinguishable from the other light horse, which essentially constituted a less-armoured version of the cuirassier.

Cuirassiers

Already before the reign of Gustavus Adolphus, the wars in the Commonwealth had shown that the Swedish cavalry as it then was armed, equipped, and trained – as harquebusiers – could not withstand the Polish winged hussars. Most urgent was the reintroduction of armour, that is, cuirassiers of the Continental type. As a result of the disastrous defeat at Kircholm, the Crown in 1606 announced that anybody who could supply himself with helmet, breast- and backplate, vambraces, rerebraces, and cuisses of plate (that is, full armour), a warhorse, saddle, and the appropriate weapons to serve as a cavalryman would, in effect, become a noble and enjoy a number of privileges (although not hereditary nobility; the Crown could, if it wished, decline the services which effectively removed the exemption from taxation). This resulted in some additional cuirassiers, but state poverty was too severe for the initiative to have a major impact.[74] Besides, the announcement came several decades too late. Public attitude to what constituted noble rank was changing, and nobility was already being seen more as a matter of birth than a function within the army.

By the early seventeenth century, it was primarily the retinue of nobles which fought as cuirassiers. However, as noted, they were not required to serve overseas and did not do so under Gustavus Adolphus (still, the retinue of nobles was not formally abolished, served in the Scanian War later in the century, was last raised in 1743, and indeed remained until 1901).

During the early reign of Gustavus Adolphus, Swedish cuirassiers looked much the same as those on the Continent. A cuirassier wore a visored close helmet or burgonet, a gorget for the neck, three-quarter armour that covered the entire upper body and both arms as well as the front half of the legs down to and including the knee, and high riding boots. Cuirassier armour was generally blackened. Until about 1620, the breastplate commonly was of the peascod belly or goose belly type, which then fell out of fashion (this

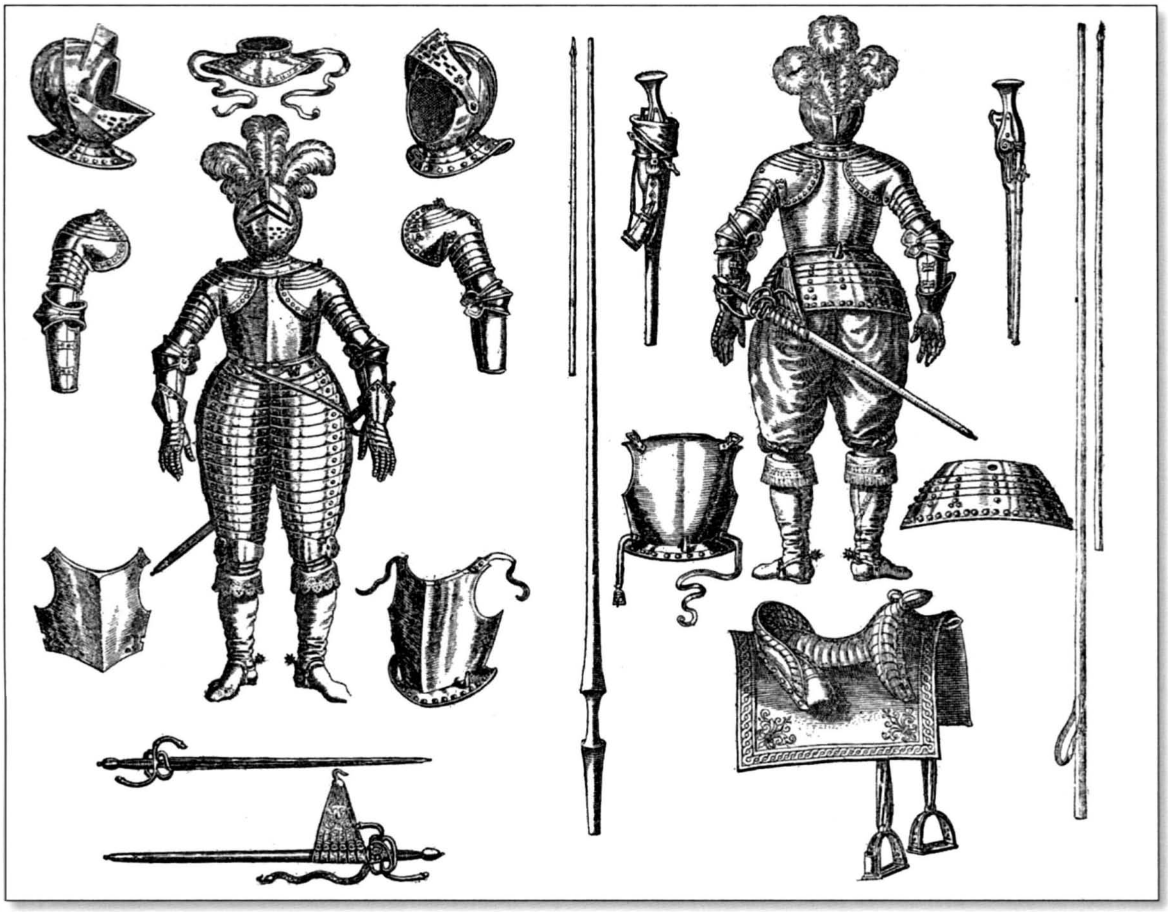
---

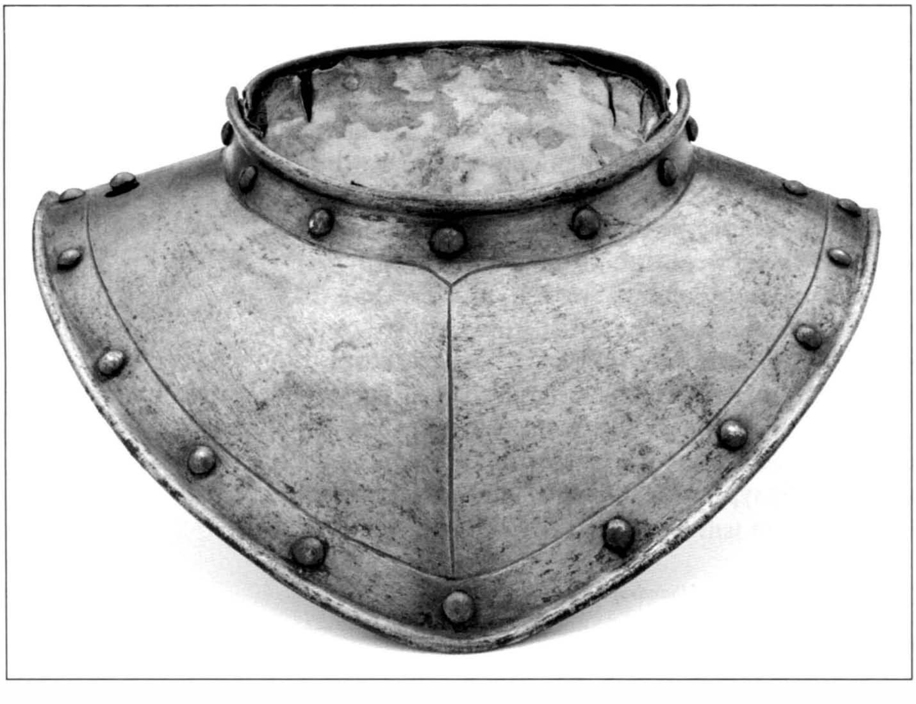
[71] Alm, *Eldhandvapen* vol. 1, pp.214; Alm, *Arméns eldhandvapen*, p.116.

[72] Hamilton, *Afhandling*, p.207.

[73] Alm, *Arméns eldhandvapen*, p.122.

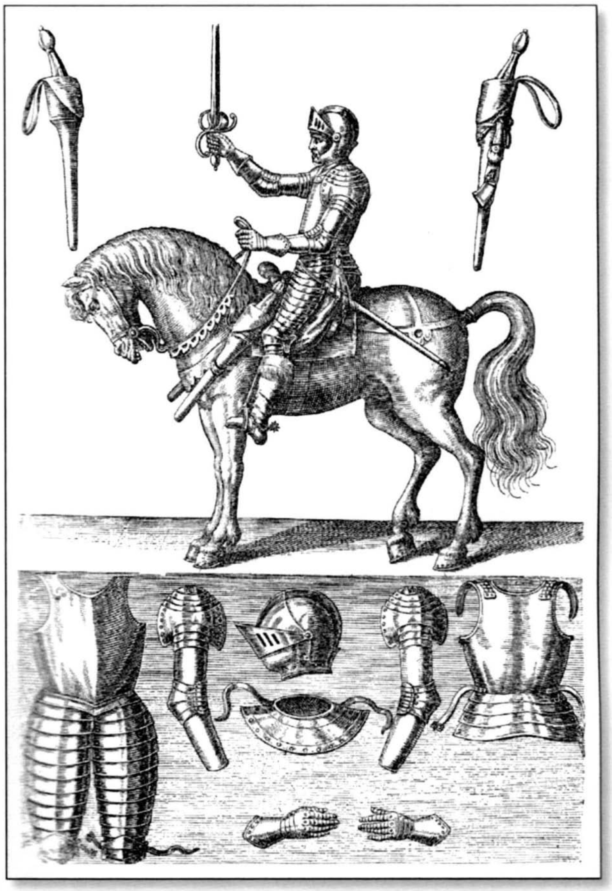
[74] Hamilton, *Afhandling*, p.144 n.275, p.173 n.299; Alm, *Blanka vapen*, p.244.





Above: Cuirassier armour. (Wallhausen, ***Kriegskunst zu Pferdt***)

Left: Gorget, originally painted black, for cuirassier armour, first half of the seventeenth century. (Skokloster Castle)



Cuirassier on horseback. (Wallhausen, ***Kriegskunst zu Pferdt***)

had already happened in Germany, where Wallhausen in 1615, in *Kriegskunst zu Fuß*, had argued that the style was 'more suited to pregnant women than to soldiers'). After about 1630, the gorget was commonly worn over the breast- and backplate. At the same time the culet, a piece of plate armour consisting of small, horizontal lames that protected the small of the back and the buttocks, began to disappear.[75]

According to regulations from 1621, each cuirassier should bring a good and strong horse of 14 hands (140cm). He should also bring a second cavalryman on a horse of 13 hands, armed with helmet, breast- and backplate, rapier, and a pair of wheellock pistols. A third horse and baggage-servant should be brought as well, but for the supply train.[76]

Since the small size of the horse made it difficult for a Swedish cavalryman to face a Continental cuirassier, Gustavus Adolphus before the battle of Breitenfeld instructed his cavalry to aim for the horse instead of the man and use the rapier to thrust; a deep stab in the horse's neck combined with a twist would cause a grievous wound after which the cuirassier would become easier to deal with.[77] Such a combat technique might even give the rider of the smaller horse an advantage.

A cuirassier was armed with a pair of wheellock pistols and a rapier. Pistols made in Sweden in the first years of the seventeenth century occasionally came with snaphance locks instead of wheellocks (after 1629, there were no longer any snaphance pistols in the Stockholm arsenal).However, wheellocks soon became standard equipment, and Gustavus Adolphus repeatedly, including in 1618, prescribed wheellocks for his cavalry. During the Thirty Years' War, the use of paper cartridges grew common among those who carried wheellock pistols. Six paper cartridges would be carried in a special cartridge box inside a larger storage unit for priming flask and wheellock spanner affixed to the holster.[78]

Early in the century, pistols were long, up to around 75cm in length, with a calibre of around 11mm.[79] Later, the calibre increased to around 16.2mm.[80] Over time, this became the standard Swedish pistol calibre. In

---

[75] Alm, *Blanka vapen*, pp.242, 251.

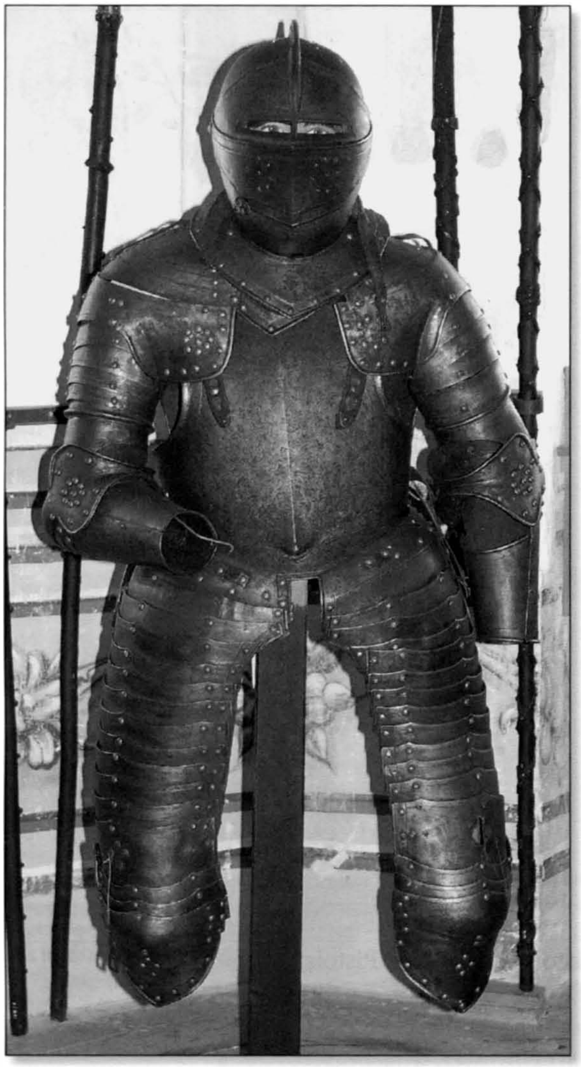
[76] Hamilton, *Afhandling*, pp.201–2; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.118.

[77] Chemnitz, *Königlichen Schwedischen* vol. 1, pp.206–7.

[78] Alm, *Eldhandvapen* vol. 1, pp.154, 202, 213; Alm, *Arméns eldhandvapen*, pp.118, 121–2.

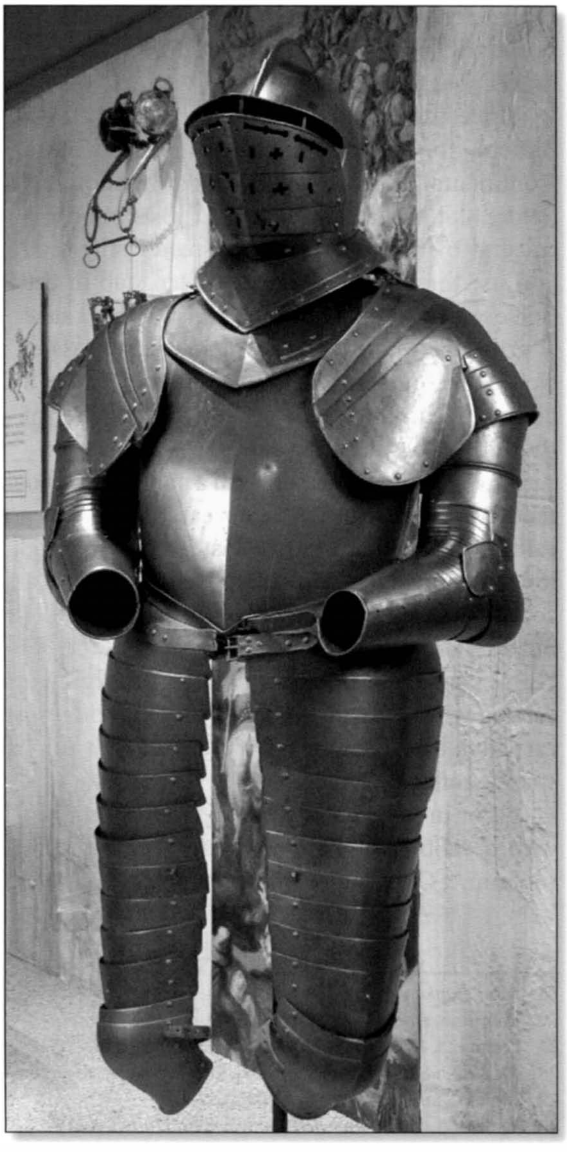
[79] Alm, *Eldhandvapen* vol. 1, p.200.

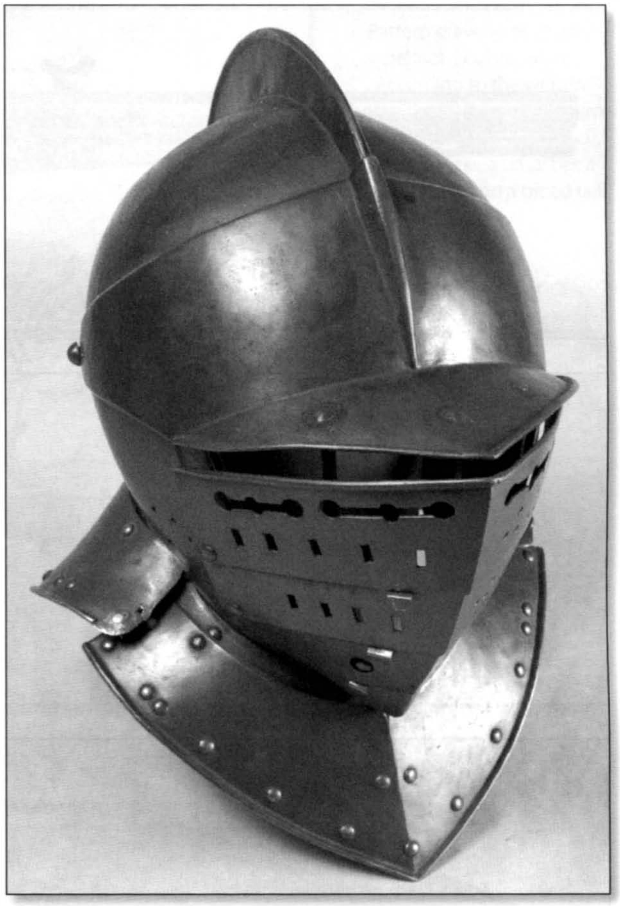
[80] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.116 n.3.



Left: Full set of shot-proof cuirassier armour, 1620–1630. Painted black and lined with soft leather. (Skokloster Castle)

Below: Full set of shot-proof cuirassier armour, 1620–1650. Painted black. From Denmark, although identical types were used in Sweden. (Army Museum, Stockholm)





Cuirassier's visored helmet, 1620–1650. Painted black. From Denmark, although identical types were used in Sweden. (Army Museum, Stockholm)

the early 1630s, including at Lützen, Gustavus Adolphus carried wheellock pistols with a total length of 58.5cm and a barrel length of 38.5cm. Other surviving army-issue pistols from the time were 55.7cm in total length, with a barrel length of 34.5cm and a calibre of 15.5mm.[81] By 1646, a total length of some 55 to 62cm had become the standard of Swedish pistols (a surviving sample has a barrel length 37.12cm, and a total weight of 1.275kg) and would so remain into the early eighteenth century.[82]

Cuirassiers were few in the Swedish army, since the armour was costly and out of reach for even many nobles, and since the weight of the armour (between 20 and 30kg) demanded the use of larger horses than Sweden easily could breed at home. Gustavus Adolphus ordered that the production process of a cuirassier's breastplate should be concluded with a test so that the armour, or at least the breast- and backplate, was 'shot-proof'.[83] This was accomplished by a live fire test, which, when successful, left a characteristic dent in the cuirass, almost in the manner of a stamp of approval.

By the 1630s, many cuirassiers replaced the old visored helmet with the lobster-tailed pot helmet, which in German was known as *zischägge* and, in Polish, *szyszak*. The style apparently reached Germany through Hungary. In Russian, the name was *shishak*. This type of helmet was ultimately of Inner Asian origin, from which it reached the Ottoman Turks and Muscovites alike. A pattern sketch from the Leufsta arms factory, dated to the 1630s, shows the type of lobster-tailed pot helmet that evidently was designed for the Swedish cavalry and manufactured in Sweden. It is close in style to the *zischägge/shishak* but has a brim three fingers broad and broad cheeks. In the 1630s and 1640s, there is some evidence that the helmet type was used by both horse and foot.[84]

The change in helmet style was only the beginning. From 1631 onwards, the armour of the cuirassiers was gradually simplified, in effect becoming identical to that of the light horse.[85] Soon, there were no more cuirassiers as such in the Swedish army.

---

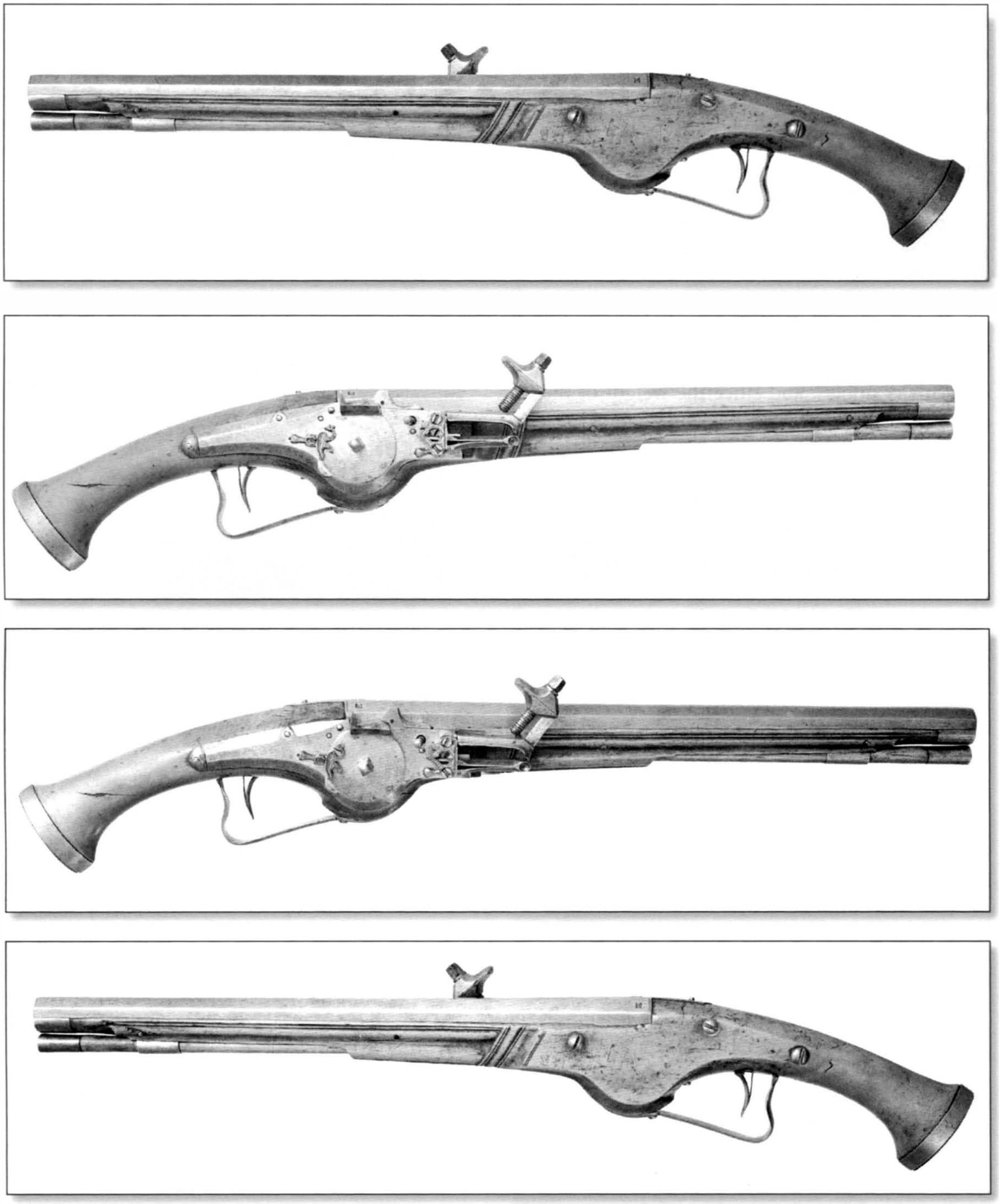
[81] Alm, *Eldhandvapen* vol. 1, p.206; Alm, *Arméns eldhandvapen*, p.117.

[82] Alm, *Eldhandvapen* vol. 1, p.211; Alm, *Arméns eldhandvapen*, p.119.

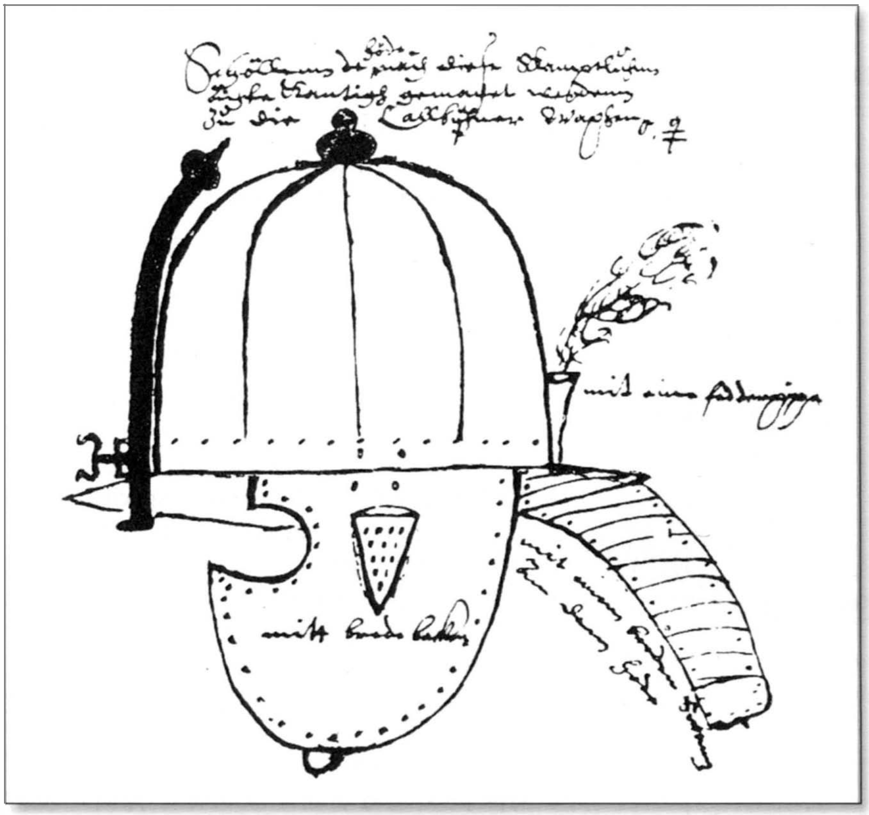
[83] Hamilton, *Afhandling*, p.205; Alm, *Eldhandvapen* vol. 1, p.214; Alm, *Arméns eldhandvapen*, p.122.

[84] Alm, *Blanka vapen*, p.249.

[85] Alm, *Eldhandvapen* vol. 1, p.214; Alm, *Arméns eldhandvapen*, p.122.



Wheellock pistols carried by Gustavus Adolphus, battle of Lützen, 1632. Of the standard cavalry model but higher-level workmanship. Total length 58.5cm, barrel length 38.5cm, and calibre 16.2mm. (Royal Armoury, Stockholm)



Pattern drawing of cavalry helmet, Leufsta, 1630s. According to the written notes, the helmet should have a brim three fingers broad, broad cheeks, a nasal bar, a feather-pipe, and a broad tail.

Light Horse

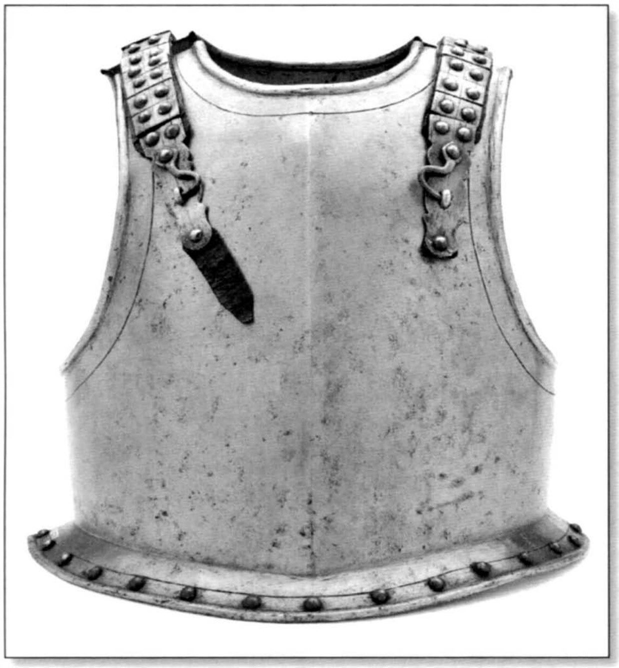
Far more common in the Swedish army than the cuirassiers was always the light horse (Swedish: *lätta ryttare*; light horsemen). They were so named because of their light armour; on the battlefield none of them operated in a skirmish role.

Even before the reign of Gustavus Adolphus, not all Swedish cavalry served as harquebusiers or cuirassiers. There were also those who lacked parts of the expensive equipment of the cuirassier and accordingly served with only helmet, breast- and backplate, a pair of pistols, and a rapier. It was this group, not the harquebusiers, which formed the pattern for Gustavus Adolphus's Swedish light horse.

Those who served in Gustavus Adolphus's light horse were essentially identical in arms and equipment to the secondary cavalryman that each cuirassier had to bring to the army. According to a regulation of 1618, the light horseman should wear a cuirass, consisting of a shot-proof breast- and backplate. Earlier in the century, a gorget would be added as well. Armament would consist of a pair of wheellock pistols and a rapier. In 1621, it was decreed that they also should wear a helmet (and helmets were indeed already in common use among the light horse). The horse should be between 12 and 13 hands (1.2–1.3m) in height. Armour was, as usual, commonly blackened.[86] From 1622, cavalry

---

[86] Alm, *Blanka vapen*, pp.245–6; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.118.



Light horseman's armour, 1600–1650. (Skokloster Castle)

officers were expected to ride horses 14 hands in height, while the horses of common troopers had a height of from 11 to 13 hands. Swedish breastplates were heavy. Tested for being shot-proof before distribution, they stopped most pistol and musket balls. It remains unknown but seems likely that the men wore thick, padded vests under the breastplate, so as to provide additional padding. This was certainly common practice later in the century. If so, the padded vest was worn under the breastplate but over the buff coat, if the cavalryman was equipped with both. In fact, many cavalrymen wore buff coats, either under the cuirass or as a replacement for the cuirass. The buff coats, especially those for the common cavalrymen, usually lacked sleeves. The light cavalry wore high riding boots, of similar style to the cuirassiers. Around 1623, a new type of cheaper cavalry armour appeared in the military procurement accounts. Known as 'cuirasses according to the new pattern', this armour seems to have been more lightweight and replaced the older, shot-proof type previously in use.[87] The new type probably remained in use during the Thirty Years' War for budgetary reasons. However, shot-proof cuirasses were reintroduced later.

Nonetheless, armour was often lacking, and in 1630, Gustavus Adolphus on one occasion wrote to Gustav Horn, instructing him that if the delivered equipment was insufficient, he should aim to equip at least the first three ranks of his cavalry with armour.[88] Perhaps this was all that could be aimed for.

Dragoons

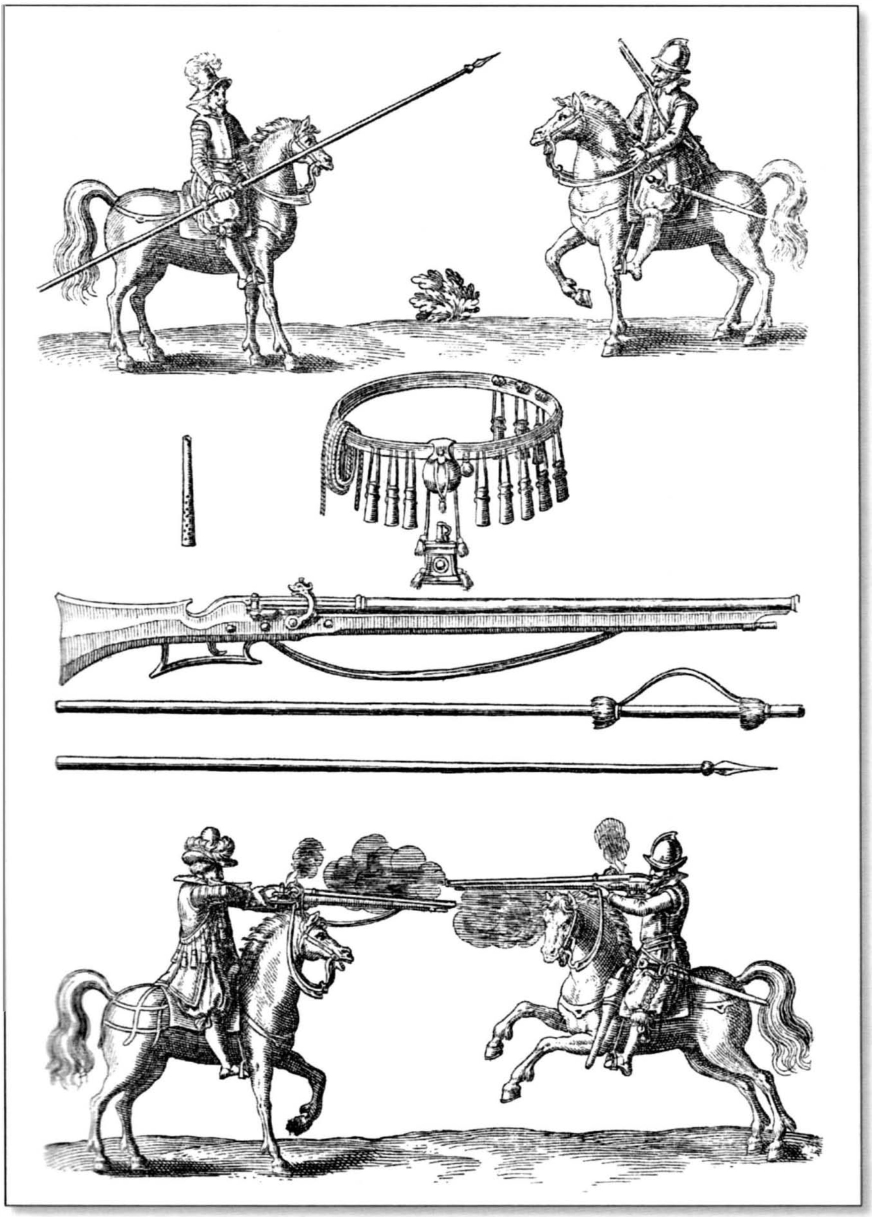
Dragoons were mounted musketeers. They moved on horseback but fought on foot. Sweden began to use dragoons early. There were dragoons in the Swedish army already in 1580, and in Gustavus Adolphus's time, at least one dragoon company, under Captain Robert Halse, was enlisted in 1611. A few dragoon units were enlisted abroad in the early 1620s as well, including Guillaume de la Barre's Dragoon Regiment, which was enlisted in 1621.[89] However, the Swedish army only began to make widespread use of dragoons in 1631, when Georg Christoph von Taupadel (*c.* 1600–1647) brought four dragoon companies from Courland and Prussia to Germany. Taupadel was

---

[87] Hamilton, *Afhandling*, pp.206–7.

[88] Alm, *Blanka vapen*, p.246.

[89] Hamilton, *Afhandling*, pp.195, 197; Alm, *Eldhandvapen* vol. 1, p.215; Alm, *Arméns eldhandvapen*, p.83.



Dragoon with equipment.
(Wallhausen, Kriegskuns zu Pferdt)

promoted to colonel, and the number of dragoons grew over time. In the 1640s, there were already four dragoon regiments in the Swedish army. All dragoons were enlisted.[90]

At first, dragoons received the same muskets as other infantry. For obvious reasons, no dragoons were armed with pikes. Each also carried a rapier. Some may have been equipped with axes as well. There is no information in the arsenal archives that pistols ever were distributed to dragoons during the

---

[90] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.121.

Facing page: Leather cannons attributed to Sweden. From top to bottom: G. Schreiber, ***Büchsenmaister Discurs*** (Breslau, 1656); J.S. Buchner, ***Theoria et Praxis Artilleriae*** (Nuremberg, 1685); drawing of cannon, Army Museum, Stockholm; two cannons in Zeughaus, Berlin; cannon in Musée de l'Armée, Paris.

Thirty Years' War. Swedish dragoons wore helmets but no breastplates. They wore shoes, not riding boots, and no spurs.[91]

A particular type of dragoon was the *jäger*. We have seen that certain groups of professionals joined to form cavalry units in exchange for exemption from some types of taxation as well as conscription. These included the game wardens, who formed such a unit already in 1611. In 1630, Captain Nils Krak raised a unit of at most 48 men among 'shooters and game wardens' in Södermanland, Östergötland, and Västergötland. The men were mounted, but fought on foot. The unit's purpose remains unknown, but being few in numbers, yet skilled huntsmen, they were likely used for reconnaissance, which would have made them *jägers*. However, the unit was counted as part of the King's bodyguard, together with the Life Guard company.[92]

Artillerymen

Artillerymen were armed with muskets and rapiers for personal protection and as a means to protect their cannons.[93] They generally dressed similarly to the infantry. Most appear to have worn grey clothes, and this eventually became common practice for artillerymen in the Swedish army. It may be assumed that grey clothes were deemed more suitable to the rough work of servicing the cannons.

At his ascension to kingship, Gustavus Adolphus inherited a considerable but often obsolete collection of artillery. Many new cannons were produced, too. Unlike other weapons, records show only one purchase from abroad: a mortar imported from Brandenburg in 1616. Some obsolete bronze cannons were recycled, forming the materials for newly-cast cannons.[94] Bronze cannons held several advantages over iron cannons. However, an iron cannon cost only a third of the corresponding bronze cannon, so iron cannons remained in common use as naval and fortress artillery. In the army, most artillery was of bronze. Gustavus Adolphus attempted a standardisation of the artillery, and to some limited extent he succeeded. A few forty-eight-pounders were used as heavy siege artillery, including during the siege of Riga in 1621. There were also twenty-four-pounders which were more generally used during sieges. Twelve-pounders, six-pounders, and three-pounders were at first primarily but not exclusively for shipboard use, although twelve-pounders were also used by the field army.[95]

However, soon experiments involving some six-pounders but primarily three-pounders began with the aim to form a mobile field artillery in the form of regimental artillery, which was the decisive artillery innovation introduced

---

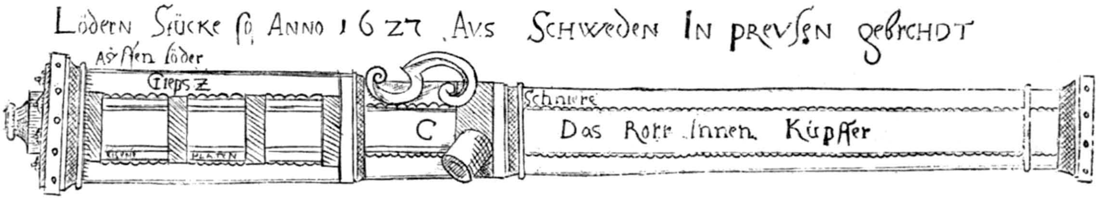
[91] Hamilton, *Afhandling*, p.209; Alm, *Arméns eldhandvapen*, pp.114–15; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.121.

[92] *Sveriges krig* vol. 3, pp.233, 575.

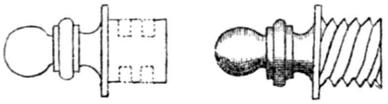
[93] Hedberg, *Kungl. Artilleriet*, p.80.

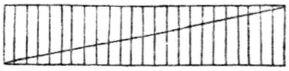
[94] Jakobsson, *Lantmilitär beväpning och beklädnad*, pp.165, 167, 168, 170–71.

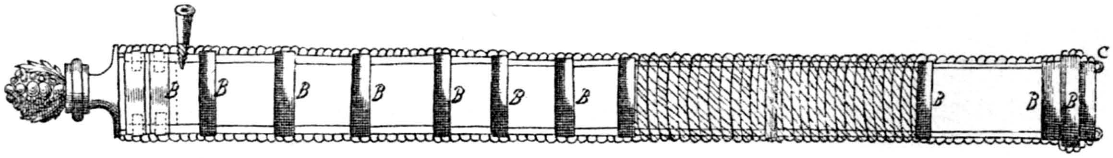
[95] Jakobsson, *Lantmilitär beväpning och beklädnad*, pp.169–70, 179–80, 235–6; Hedberg, *Kungl. Artilleriet*, 66–9.

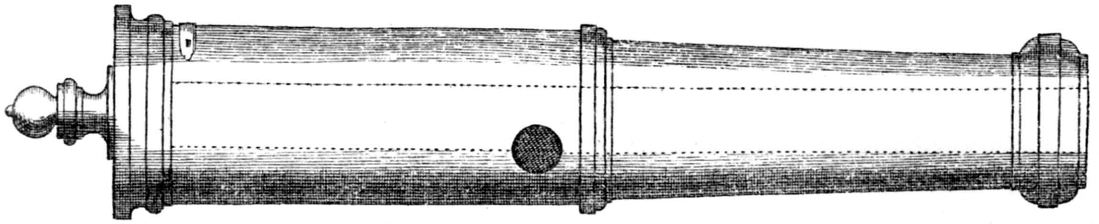

Lödern Stücke so Anno 1627 Aus Schweden In preussen gebrchdt
Asẏffen löder
Gieps Z
Schnure
C
Das Rorr Innen Küpffer
PLAHEN

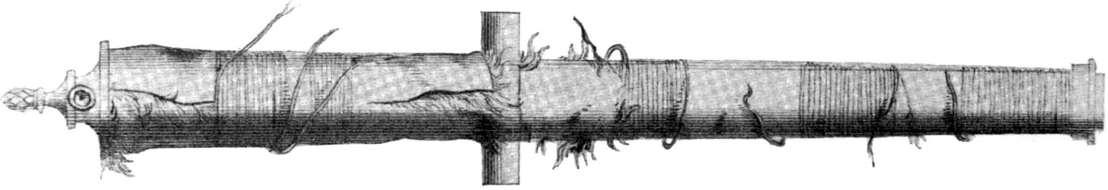
a



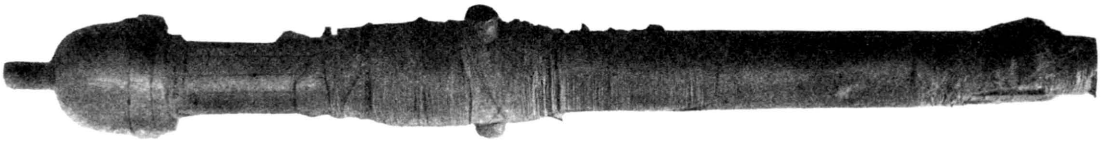



B
B
B
B
B
B
B
B
B
B
B
C



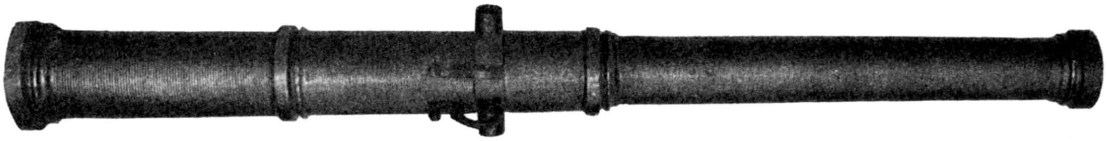


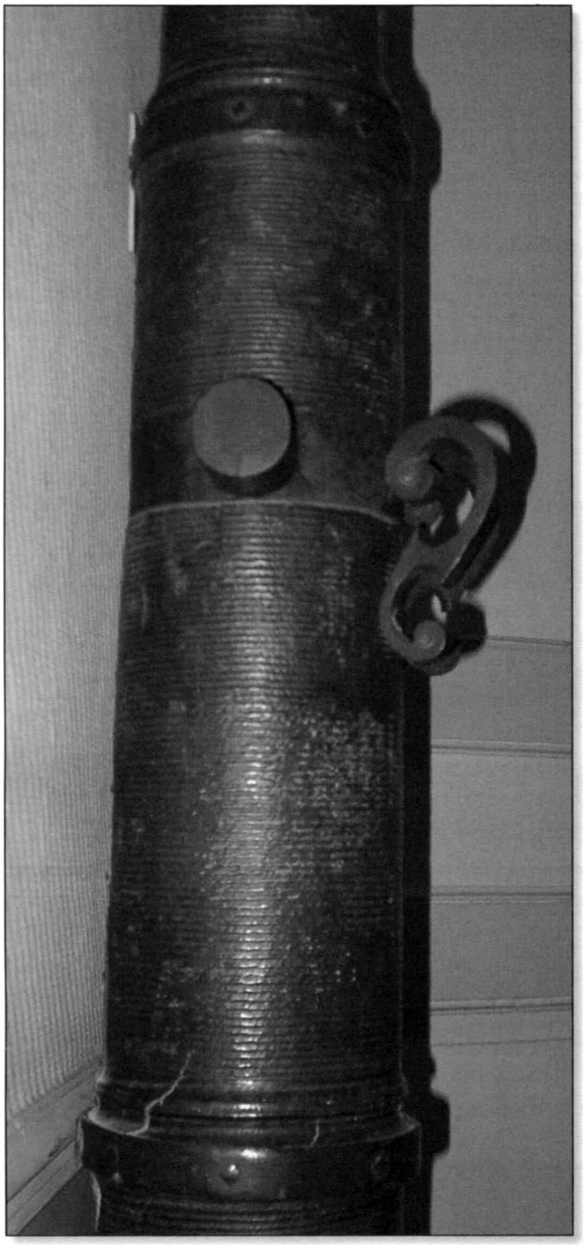
a



b

c





Leather cannon. Said to have been captured at Lützen in 1632, with dolphins in the form of a letter G, for Gustavus. (Musée de l'Armée, Paris; Photo: Author)

by Gustavus Adolphus. It is possible that the first regimental artillery was introduced already in 1625.[96] It was certainly in use in 1626, since Dahlbergh's order of battle for and deployment plan at Dirschau for this year, admittedly compiled much later (and not to be confused with the battle of Dirschau in the following year), depicts each battalion with two regimental cannons.[97]

Among many innovations, the most striking was the short-lived experiment with leather cannons. The Swedish leather cannon was not the first prototype of its kind. In Denmark, similar experiments had taken place already in the 1590s.[98] The Swedish leather cannon was based on a Swiss design from 1622, which Colonel Melchior Wurmbrandt, a former Imperial officer, brought when he took service in the Swedish army in 1625. By 1627 if not before, he was manufacturing leather cannons for Gustavus Adolphus. At roughly the same time, a Scottish officer named Robert Scott, too, built leather cannons which he attempted to sell to Gustavus Adolphus. Scott entered into Swedish service in 1623, but as far as is known, he experimented with leather cannons only from 1627, when they were tested in the battle of Dirschau in which, as noted, the brigade formation, too, was first tried.[99] The price he demanded from Gustavus Adolphus was apparently too high, so disappointed, Scott in late 1628 went into Danish service. The leather cannon was a three-pounder which due to its light weight and improved gun carriage could be moved by its crew alone. It was manufactured with a thin copper barrel tightly wound with wire and further reinforced with wood and several layers of leather casing shrunk on top.

Several leather cannons have survived into the present, and those attributed to the Swedish army have calibres of between 50 and 56mm, which effectively made them three-pounders. There were disadvantages with the design. A leather cannon had to be provided with special gunpowder and a much-reduced charge. Stone shot would have been an option, since such shot was considerably lighter

---

96 Hans Ulfhielm and Eric Granefelt (eds), *Kungl. Artilleriet: Svenska Artilleriet i Östersjöprovinserna 1561–1721* (np: Militärhistoriska Förlaget, 2005), p.165.

97 Barkman, *Gustaf II Adolfs regementsorganisation*, pp.82, 220.

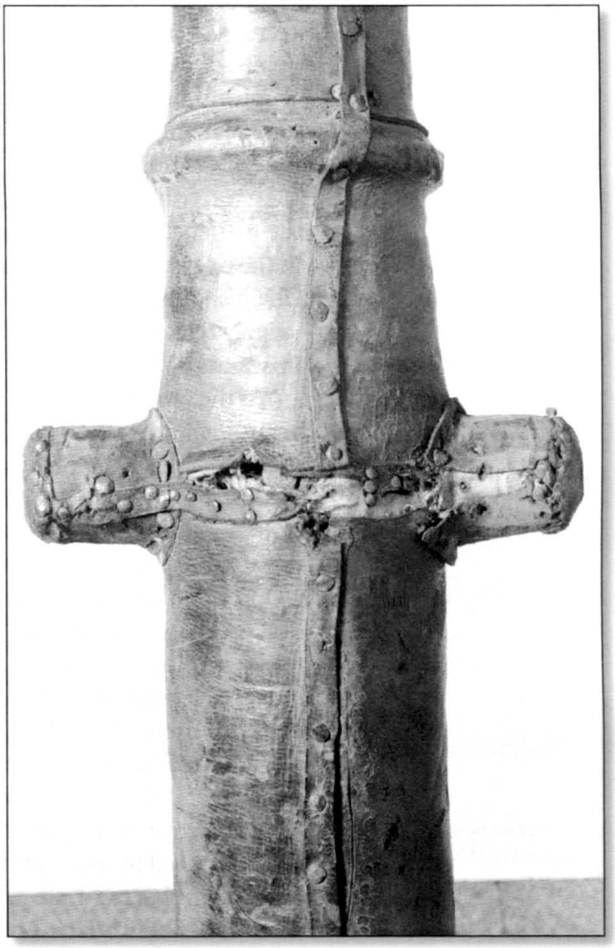
98 Hedberg, *Kungl. Artilleriet*, pp.167, 305.

99 Petri, *Kungl. Första livgrenadjärregementets historia* vol. 2, p.76.

than cast iron, and this was noted at the time; however, there is no evidence that the Swedish leather cannons fired stone shot. Moreover, the leather covering of the metal barrel turned out to function as insulation, which meant that after firing a few rounds, the barrel became too hot to load safely.[100]

Although the leather cannon did not remain in service for long, more conventionally manufactured regimental cannons, three-pounders of bronze, soon became general issue. Conventional three-pounders of bronze intended as regimental artillery were manufactured in Stockholm in 1629 and shipped to Prussia by David Fredrik von Siegroth.[101] Yet more were manufactured and tested in 1630, and some 80 such pieces were in the army inventory when Gustavus Adolphus's expeditionary force was sent to Germany.[102] In late 1630, Gustavus Adolphus ordered that each infantry regiment should be armed with six regimental cannons, three for each battalion. With a calibre of about 7.7cm and a weight just above 700kg, each was easily drawn by one or two horses, and on the battlefield could be moved by two or, more likely, three men. They fired already prepared grape-shot cartridges (multiple balls of musket or larger size in a cartridge) or case-shot (smaller balls or metal fragments in a canister), which enabled a significantly higher rate of fire, in fact higher than that of a unit of musketeers.[103] No other army in Europe then had any similar weapon system, and the regimental cannons gave the Swedish army a significant advantage over its adversaries. At Breitenfeld, each infantry battalion reportedly had two or three cannons.

Designed for short-range fire against enemy formations, the regimental artillery was generally loaded with grape-shot or canister shot, with which it might mow down an entire unit of men. The cartridges were carried in a



Leather cannon. Manufactured by Ludvig Ripp in 1627, test-fired in Stockholm in 1628, then sent as a gift to Axel Oxenstierna in Elbing later in the year. Eventually returned to Sweden. Weight 4.93kg, length 153cm. (Royal Armoury, Stockholm) container attached to the gun carriage, which enabled fast reloading and a comparatively high rate of fire. Both the grape-shot and canister shot were short-distance projectiles. Otherwise, iron round shot was the most common type of artillery projectile. Chain shot, a type of cannon projectile formed of two sub-calibre balls chained together which when used against line infantry caused terrible slaughter, were used as well. However, the use of chain shot on the battlefield fell sharply in the Swedish army (but remained in common use in the navy against the rigging of enemy ships and was also used during sieges). Chain shot may have been used at Lützen, where an anonymous account from Leipzig relates that Pappenheim was hit by wire ball (*draht Kugel*).[104] However, this sounds more like a description of the wire used to contain a canister shot.

---

[100] Jakobsson, *Lantmilitär beväpning och beklädnad*, pp.180–81. For some additional details including the Swedish impact on subsequent Scottish leather cannons, see David Stevenson and David H. Caldwell, 'Leather Guns and Other Light Artillery in Mid 17th-Century Scotland', *Proceedings of the Society of Antiquaries of Scotland* 108 (1976–1977), pp.300–17.

[101] Siegroth was the son and successor as artillery manufacturer of Colonel Hans Heinrich von Siegroth, whom Gustavus Adolphus had invited into Swedish service in 1618 and who manufactured artillery until his death in 1621. Hedberg, *Kungl. Artilleriet*, p.21.

[102] Barkman, *Gustaf II Adolfs regementsorganisation*, p.220; Jakobsson, *Lantmilitär beväpning och beklädnad*, pp.181–2.

[103] Hamilton, *Afhandling*, p.251; Barkman, *Gustaf II Adolfs regementsorganisation*, p.220; Hedberg, *Kungl. Artilleriet*, p.68.

As the war continued, mortars became increasingly common in the Swedish army. Primarily used during sieges, there were also hand mortars which fired grenades. The firing of grenades increased sharply. Grenades were particularly used against enemy horse. Petards, too, were commonly used during sieges; however, they grew obsolete with the introduction of double gates and were far less used in the latter half of the Thirty Years' War.[105] Heated shot, that is, iron round shot that had been heated before firing so it would set fire to flammable objects, continued to be used during sieges.[106] In fortresses, it was still common to use wall guns, fixed to the walls they were meant to defend; they came in different sizes, with a calibre ranging from 22 to 40mm, and many were more than two metres long. Blunderbusses, too, were used in siege warfare.[107]

Slow-match for artillery usage was of a thicker type than what was used by musketeers. The Swedish army estimated the daily consumption of artillery slow-match as 5.4m per gunner.[108]

Compared to other West European armies, the Swedish artillery was strong both in numbers and effect. It was no exaggeration when Turner later concluded that, 'The *Swedish* Trains of Artillery since their first footing in *Germany* have had the reputation to be the most exactly composed, and conducted by the most experimented Artists of any in *Christendom*.'[109]

Engineers and Sappers

As noted, engineers and sappers formed part of the artillery. As a result, the artillery units included a variety of tools, building and bridging materials, pontoon bridges, and similar equipment. After the reign of Gustavus Adolphus, engineering equipment was gradually moved from the artillery to the supply train.[110]

---

[104] Brzezinski, *Lützen*, p.80.

[105] Hedberg, *Kungl. Artilleriet*, pp.69, 152.

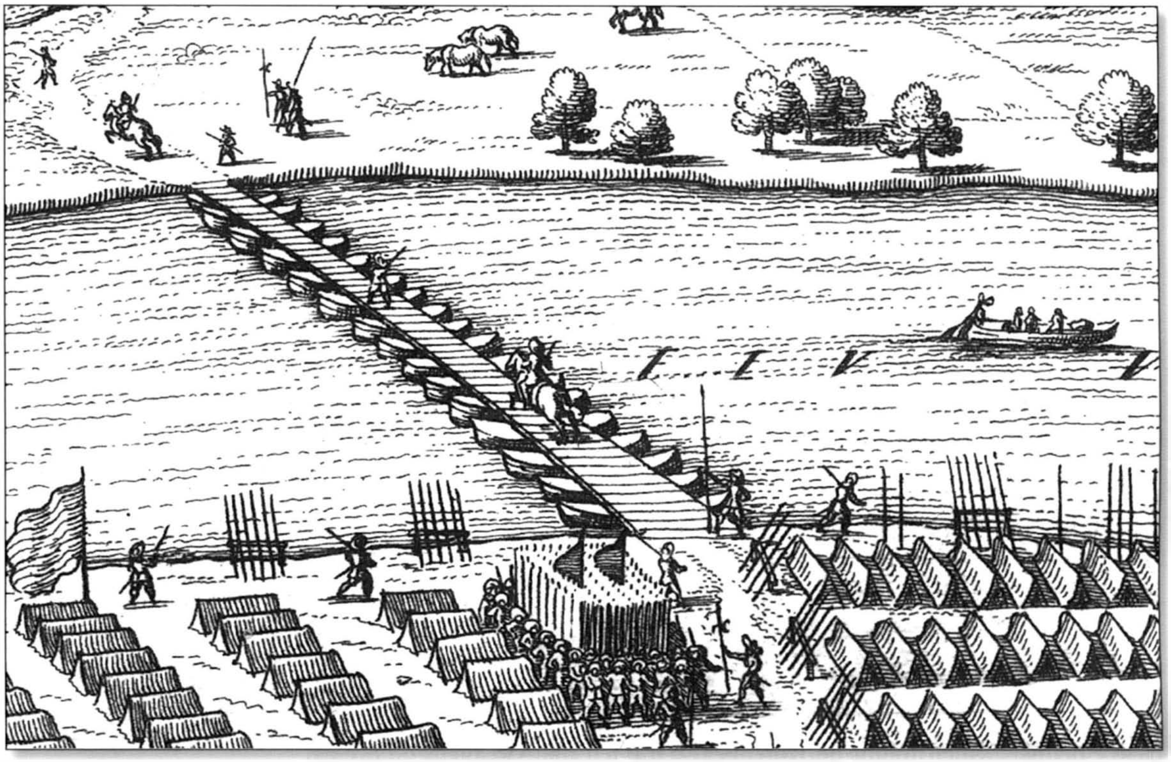
[106] *Ibid.*, p.74.

[107] Alm, *Eldhandvapen* vol. 1, pp.194, 196.

[108] Hedberg, *Kungl. Artilleriet*, pp.78–9.

[109] Turner, *Pallas Armata*, p.194.

[110] Hedberg, *Kungl. Artilleriet*, p.80.



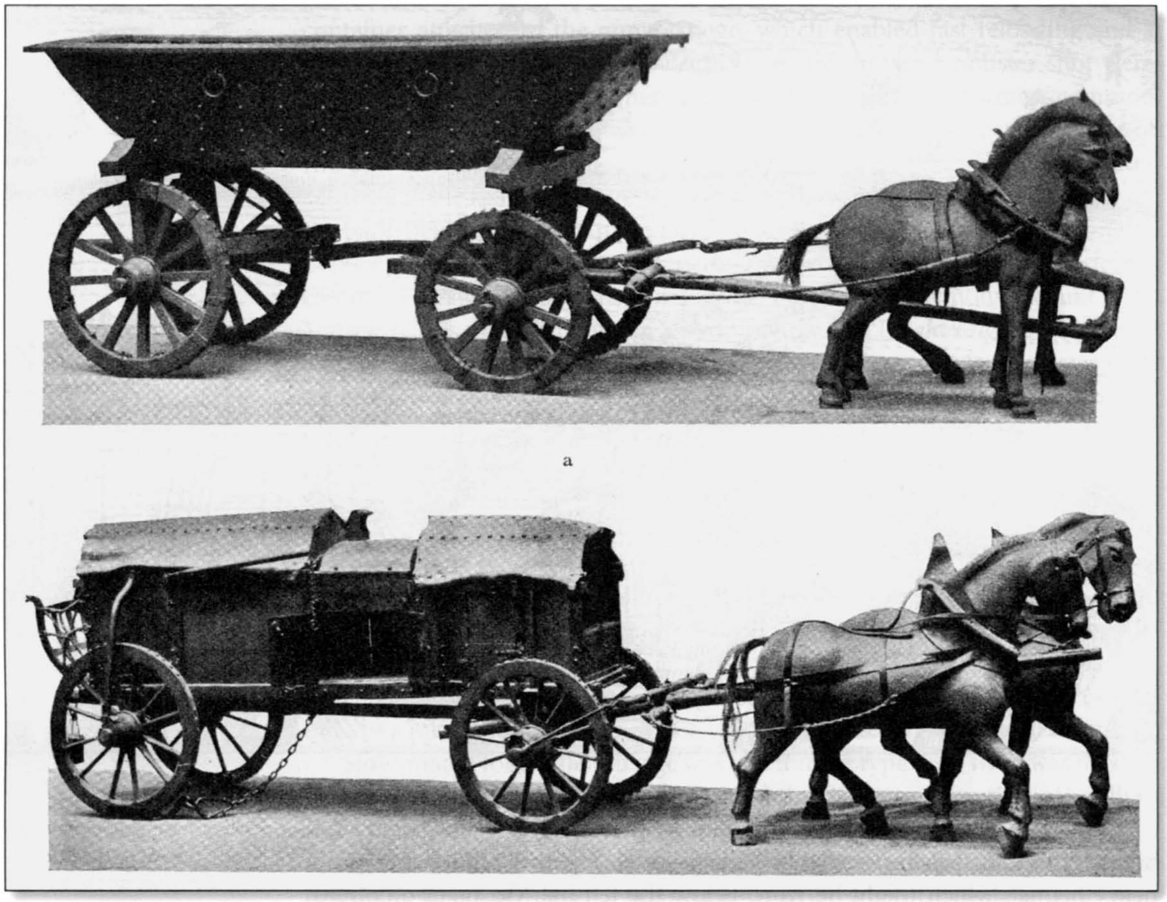
Swedish camp and pontoon bridge, 1631. (***Theatrum Europaeum***; photo: Medströms)

During siegeworks, the soldiers would frequently wear heavy, shot-proof breastplates and sometimes also backplates, often together with a shot-proof heavy helmet, which might be worn below the felt hat. Gustavus Adolphus used such a helmet, which is preserved in the Royal Armoury, Stockholm, and has a weight of more than 15kg. According to a regulation from 1622, every infantry regiment should have eight shot-proof cuirasses with helmets and round shields (that is, one per company). The prescribed type of shot-proof cuirass was very expensive, rated at a cost of 30 Riksdalers. In comparison, a cuirassier's cuirass cost only 12 Riksdalers, and a pikeman's cuirass was cheaper still. It is unknown whether this outfit was intended for siegeworks, but this seems likely.[111] Alternative interpretations have focused on armour to be worn by captains or even soldiers armed with round shields (sword-and-buckler men) of the type that then remained in use on the Continent, including in the life guard of Maurice of Nassau, which may have influenced Swedish practices.[112] If so, however, the number of eight per regiment would appear to be too low to make much sense.

---

[111] Alm, *Blanka vapen*, p.256.

[112] Eduard Wagner, *European Weapons & Warfare 1618–1648* (London: Octopus Books, 1979), p.104.



Pontoon wagon and field smithy. Models made in Nuremberg for Gustavus Adolphus. (Germanisches Nationalmuseum, Nuremberg).

Grenadiers

Grenadiers were specialist infantrymen armed with a musket and several grenades each. In the time of Gustavus Adolphus, they were few in numbers and little is known about them. However, the use of explosive grenades grew within the artillery, and it is unsurprising that their use by the infantry increased, too. Grenades intended to be thrown by hand were originally developed for siege work, since grenades enabled the attackers to clear a breach of defenders before exploiting it. In Scandinavia, grenades were in 1611 stored in Kalmar Castle and in the following year, in Elfsborg Castle, both then held by Denmark. Gustavus Adolphus may have been the first ruler who formed dedicated units armed with grenades, that is, grenadiers. The Swedish defenders under Colonel Johann Jacob von Thurn (d. 1643) used grenades at the siege of Ratisbon (Regensburg) in 1634. However, these units were temporary and were not retained after the siege.[113]

---

[113] Alm, *Eldhandvapen* vol. 1, p.250; Jakobsson, *Lantmilitär beväpning och beklädnad*, p.138. On the siege, see Peter Engerisser, 'Eine bisher unbekannte Ansicht der Belagerung Regensburgs im Jahr 1634', *Verhandlungen des Historischen Vereins für Oberpfalz und Regensburg* p.148 (Regensburg:

Grenades were made of clay, iron, lead, or copper, the last two types being most common in Sweden. The weight of a hand grenade ranged from 0.5–2kg.[114] Archaeological finds from the battlefield of Lützen include fragments of grenades, but it remains unknown whether they were thrown by hand or fired from artillery, and who used them.[115]

Naval Personnel

In addition to artillery, Sweden also manufactured sidearms for its navy. In 1623, the Danish resident in Stockholm, Peder Galt, copied, and reported to Copenhagen, the pattern for naval swords ('boarding swords'; Danish: *entresverd*; Swedish: *äntersvärd*) that Gustavus Adolphus had manufactured in the Arboga arms factory. An order had been placed for 2,000 such weapons to be ready for the summer campaign.[116] Unfortunately, the original pattern seems not to have been preserved. Some naval swords were broad long swords that either had no point or only a blunt one, of a type that had been manufactured in Arboga since 1554. Some of these were so-called command swords that were given to admirals and ship captains, a sixteenth-century custom that survived throughout the seventeenth century. Others may have been more similar to the rapiers used by the infantry, or indeed the sabre-like cutlasses that also existed in small numbers. The navy often received army surplus rapiers, and such a delivery is, for instance, known to have taken place in 1625. In addition to swords, the navy employed a variety of spears, half-pikes, and pikes. Naval pikes were to be 10 cubits long in 1613, but in 1616, naval regulations prescribed a pike length of nine cubits. In other words, the navy regulations for pikes were identical to the army regulations. Half-pikes were to be five cubits in length, again the same as in the army. From at least 1635, the navy also utilised a small number of partisans, used by under-officers. Sailors also employed axes, both as tools and weapons. As for firearms, the navy employed muskets, blunderbusses, and pistols. Most were matchlocks, although the navy knew that they formed a fire hazard and accordingly preferred snaphance locks. Pistols intended for the navy, so-called boarding pistols (*änterpistoler*), usually had snaphance locks and were occasionally carried several at a time, hanging from bandoliers.[117] Finally, the navy employed hand grenades and a large variety of incendiaries.[118]

Verlag des Historischen Vereins für Oberpfalz und Regensburg, 2008). Available online at <www.engerisser.de/Belagerung_Regensburgs1634.pdf>.

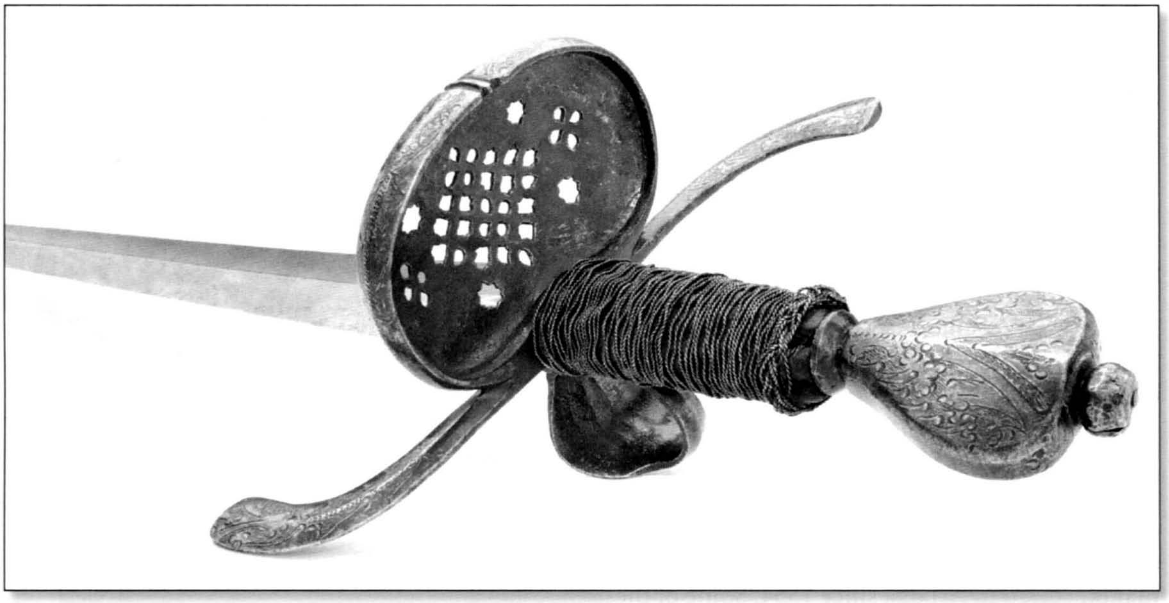
[114] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.114.

[115] Schürger, *Archaeology*, pp.194–6.

[116] Letter of 12–26 January 1623 (O.S.), *Peder Galts depescher*, p.49.

[117] Josef Alm, 'Flottans handvapen', *Sjöhistorisk Årsbok 1953–54* (Stockholm: Föreningen Sveriges Sjöfartsmuseum i Stockholm, 1954), pp.67–147, on pp.72, 76–83, 85–7.

[118] *Ibid.*, p.91. See also Michael Fredholm von Essen, 'On the Trail of Rocketry: The Enigma of Scandinavian Naval Pyrotechnics in the Sixteenth to Eighteenth Century', *Arquebusier* 30:6 (2008), pp.24–39; Michael Fredholm von Essen, 'On the Trail of Rocketry 2: Early Eighteenth-Century Gas Warfare and Other Norwegian Innovations in Naval Pyrotechnics', *Arquebusier* 32: 1 (2010), pp.2–5; Michael Fredholm von Essen, 'Early Eighteenth Century Naval Chemical



Officer's rapier of the Swedish style, with S-shaped quillons, large basket hilt, and button in the shape of an inverse pear. Probably manufactured at the Vira arms factory, owned by Admiral Claes Fleming. (Skokloster Castle)

Rapiers

Rapiers were used by both horse and foot, and those made for the infantry were somewhat shorter than those used by the cavalry. Both foot and horse in the early years typically wore the rapier hanging from a waist belt. As the war progressed, it became more common to hang the rapier from a baldric.[119] Rapiers were double-edged and most were fairly crude. Sword hilts far more often consisted of blackened plain iron than brass. In the early years of Gustavus Adolphus, there were not yet any standard patterns, however, soon a typical 'Swedish-style' rapier emerged.

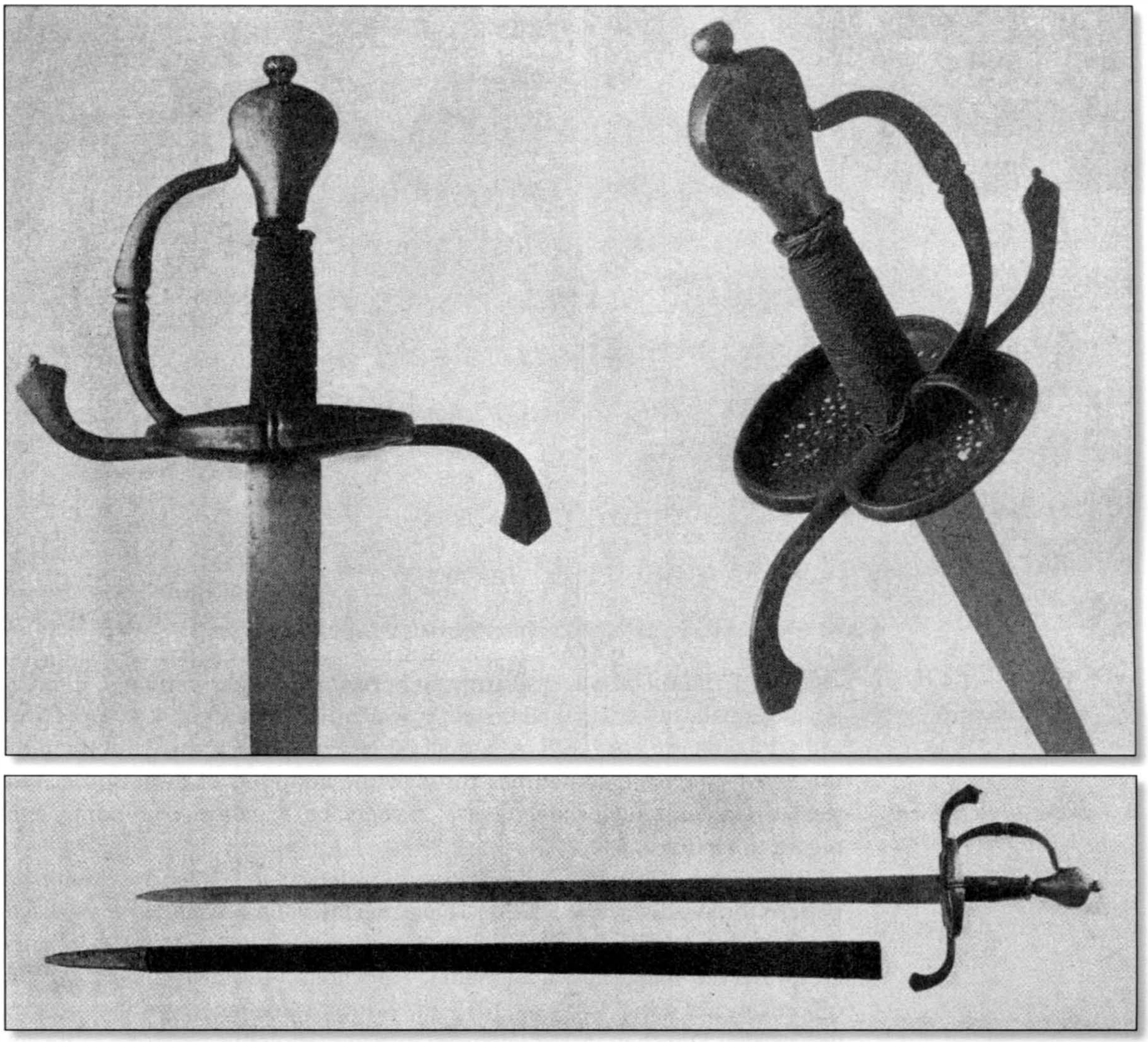
In modern-day research, this style was first identified in two weapons preserved in Skokloster Castle: what was first believed to be a common infantryman's rapier but which after restoration was assessed to be an officer's rapier with an iron hilt without guard, a blade length of 91.2cm, and a width of 4.3cm, dated to the period 1620 to 1640; and a similar but somewhat longer cavalry rapier with a guard, believed to date from the period 1640 to 1650, and a scabbard of black leather.[120] Both would seem typical of the Swedish-style rapier and additional rapiers of the type have since been found, including one owned by Axel Oxenstierna. However, it should be remembered that very few of the many thousands of Swedish rapiers which were produced during the war have survived into the present. In contemporary research,

---

Warfare in Scandinavia: A Study in the Introduction of New Weapon Technologies in Early Modern Navies', *Baltic Security and Defence Review* 13: 1 (2011), pp.122–151.

[119] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.115.

[120] Heribert Seitz, 'De försvunna värjorna: Svensk sidobeväpning under 30-årigakriget', *Fataburen: Nordiska museets och Skansens årsbok* 1946, pp.93–110, on pp.96, 110; Heribert Seitz, *Svärdet och värjan som armévapen* (Stockholm: Kungl. Armémuseum, 1955), p.132. Seitz was a renowned historian who specialised in rapiers, worked for many years in the Royal Armoury and the Army Museum, Stockholm, and also served as director of the latter.



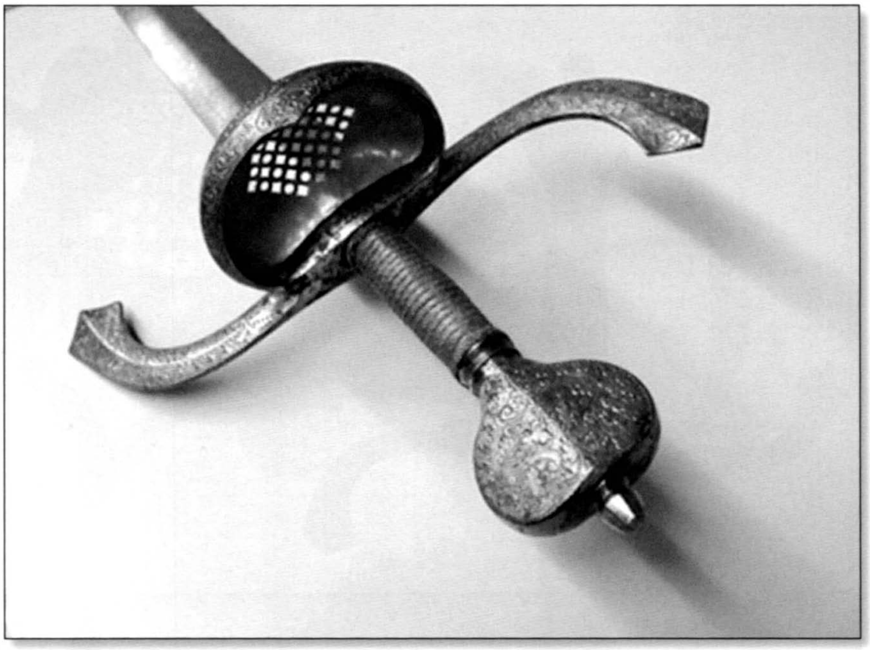
Cavalryman's rapier, 1640–1650. Probably manufactured at the Vira factory. (Skokloster Castle)

the style is more commonly referred to as the Dutch–Swedish style, since it was the result of the standardised manufacturing processes introduced in Sweden by Louis De Geer.

Still, based on contemporary illustrations, the Swedish-style rapier soon became widely recognised as such on the Continent. The style appears in many contemporary prints, in particularly those that were published in support of the Protestant cause. In an allegorical depiction of the harsh dinner that was served to Tilly at Breitenfeld in 1631, servants bring two dishes of 'confectionery' to the table – in reality a plate of musket and pistols and a plate of two Swedish-style rapiers, respectively.

The style of rapier is also visible in battle depictions ranging from Rain-am-Lech in 1632 to the siege of Prague in 1648. Rapiers of this pattern were used by both officers and men. Unfortunately, no manufacturing pattern of this style has survived into the present.

There is, however, a postscript to the story of the Swedish-style rapier. During the war, the Swiss adopted an almost identical variant of the Swedish-



Officer's rapier with a blade made in Solingen, 1620–1640, owned by Axel Oxenstierna. Blade length 85.0cm, blade width 4.4cm, total length 103.5cm. (Royal Armoury, Stockholm)

style rapier, like in the Swedish army for both officers and common soldiers.[121] No doubt the Swiss wished to copy what they regarded as a successful military system. We have seen that other European armies, too, copied the Swedish model, sometimes through the adoption of Swedish-derived weapons systems such as regimental artillery, but yet more commonly with regard to tactics.

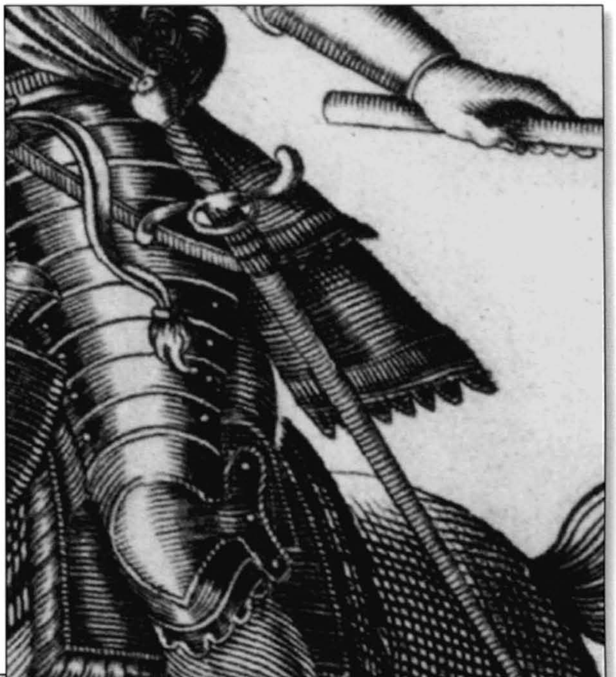
There was also what perhaps can be referred to as another common pattern for Swedish-style rapiers. This pattern was based on the rapiers used by Gustavus Adolphus himself. Two rapiers carried by Gustavus Adolphus are preserved in the Royal Armoury, Stockholm. The first, a fairly typical officer's rapier dated to about 1615 and with a blade length of about 86cm, was used at Dirschau in 1627, where Gustavus Adolphus parried a sabre cut that severely disabled its guard. The width of the blade is about 4cm below the hilt and ricasso. At Leufsta arms factory, a pattern sketch for Swedish army rapiers of the 1630s has been preserved, and it corresponds closely to the rapier Gustavus Adolphus used at Dirschau, except that the quillons are straighter.[122] It is likely that the sketch depicted a pattern for an officer's rapier. Several rapiers of this type have been preserved in the Royal Armoury and in parish churches, to which they were given for funeral memorial purposes. Rapiers of this type were still used in the mid seventeenth century.

At Lützen in 1632, Gustavus Adolphus carried another rapier but in similar style. This, too, is a typical officer's rapier, except that it came with a strap to

---

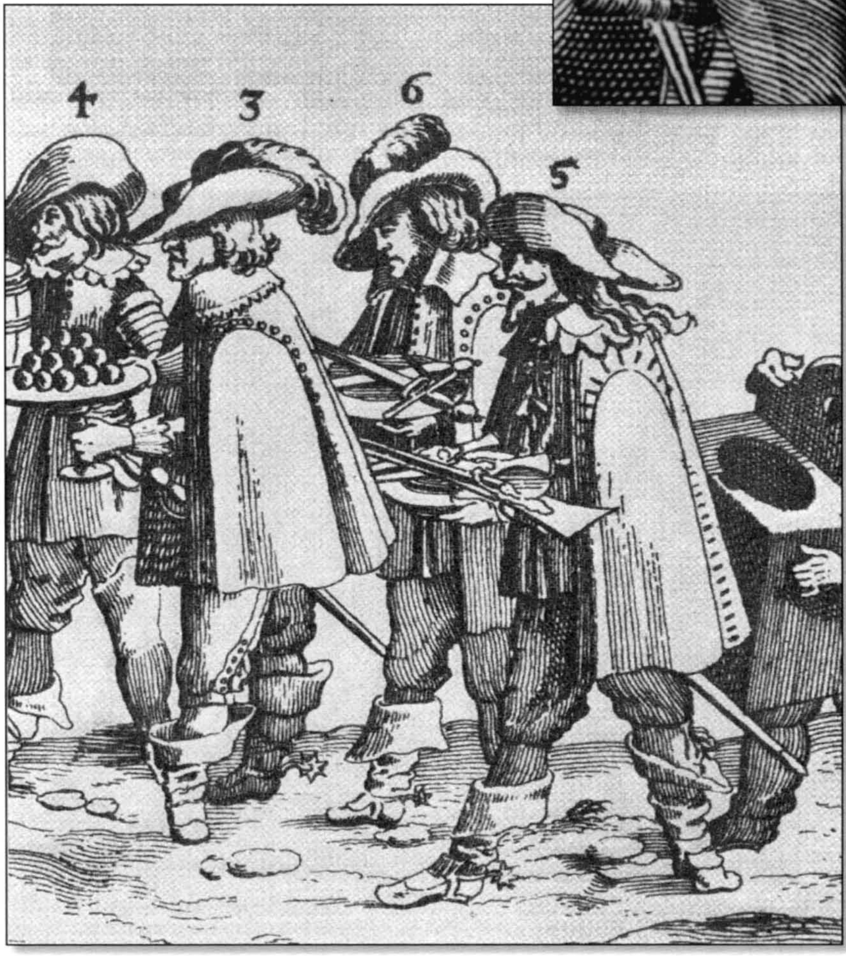
[121] Seitz, 'De försvunna värjorna', pp.108–9. Seitz cites Eduard A. Geßler, *Führer durch die Waffensammlung: Ein Abriss der schweizerischen Waffenkunde* (Zürich: Schweizerisches Landesmuseum, 1928).

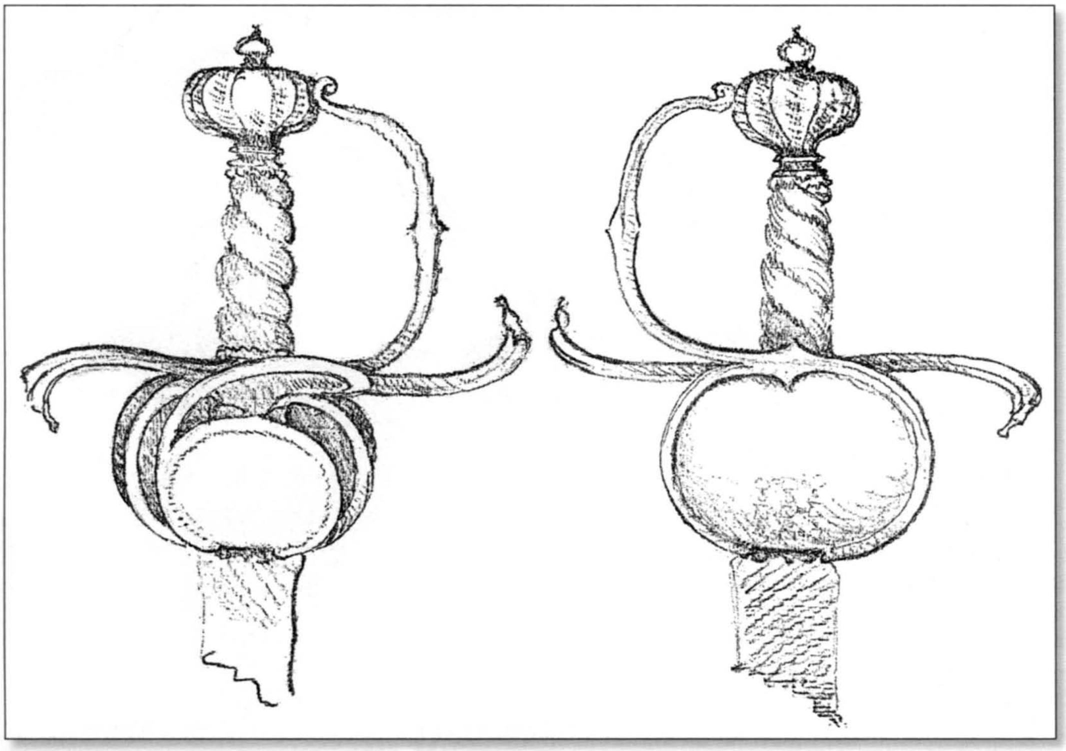
[122] Alm, *Blanka vapen*, pp.45–6. On the rapier damaged at Dirschau, see *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:3 (Stockholm: P.A. Norstedt & Söner, 1900), p.607.



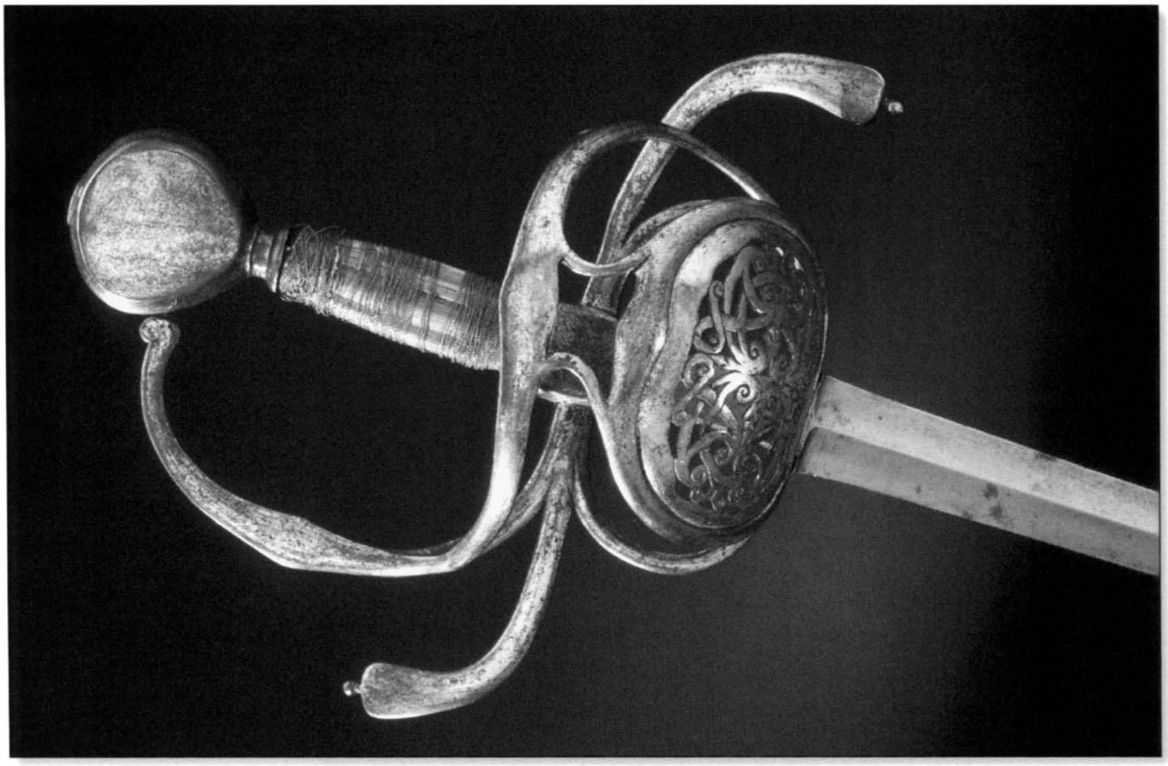
Above: Rapier of Field Marshal Johan Banér, 1634–1641.

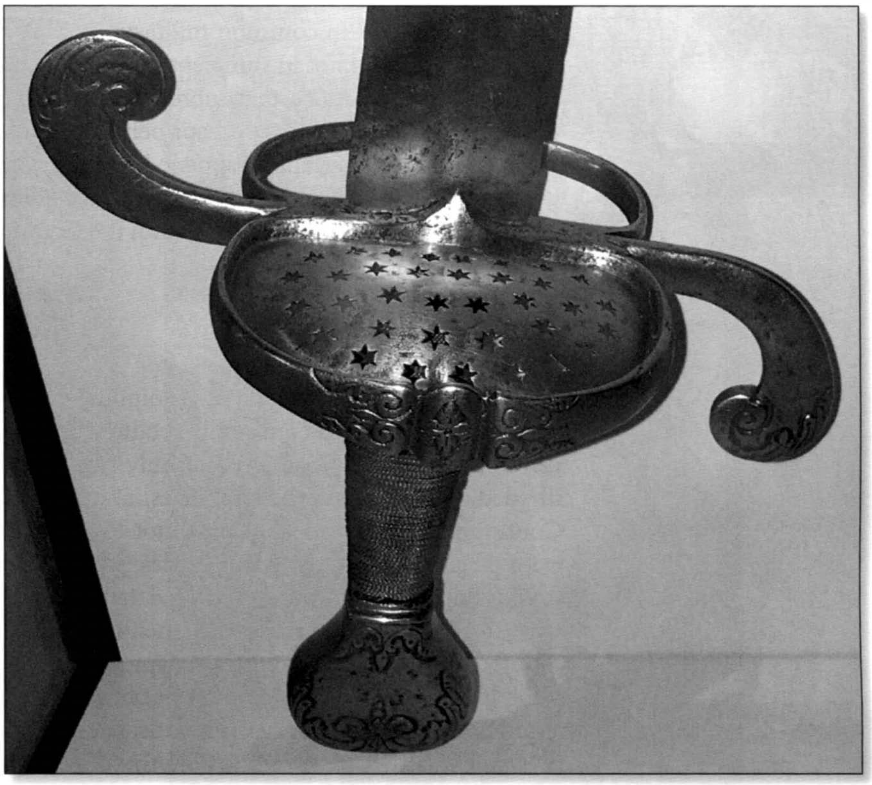
Below: servants bringing plates of 'confectionary' (firearms and typical Swedish-style rapiers) to Tilly after the battle of Breitenfeld, 1631. Propaganda print from immediately after the battle.





Above: pattern sketch of Swedish officer's rapier, Leufsta, 1630s. Below: Rapier carried by Gustavus Adolphus, battle of Lützen, 1632. Blade length 92.9cm and width 2.8cm. Manufactured in Germany, 1625–1630. (Royal Armoury, Stockholm)





Swedish-style cavalry rapier, 1620–1640. (Army Museum, Stockholm; photo: author)

fasten it to one's wrist. This was a custom that Gustavus Adolphus probably adopted from the Commonwealth forces, or possibly the Muscovites, among whom this oriental fashion was common so as to enable the use of one's hands for other purposes, such as shooting the bow, without losing the sabre.[123] It remains unknown how common the use of such straps was in the Swedish army. They certainly existed, because another one has been found, dated to the end of the Thirty Years' War, which proves that their use was not a passing fad.[124] The total length of Gustavus Adolphus's rapier is 115.6cm, with a blade length of 92.9cm. The blade is 2.8cm broad and total weight is 1.410kg.

Neither the Leufsta pattern nor the aforementioned Swedish-style rapier actually regulated the production of Swedish rapiers. There were not yet standardised patterns as such, and officers in particular were free to choose their own weapons. Likewise, we can assume that common soldiers often had to arm or rearm themselves according to what they, or the army procurers, managed to scrounge in the area of operations, whether in the Commonwealth or Germany.

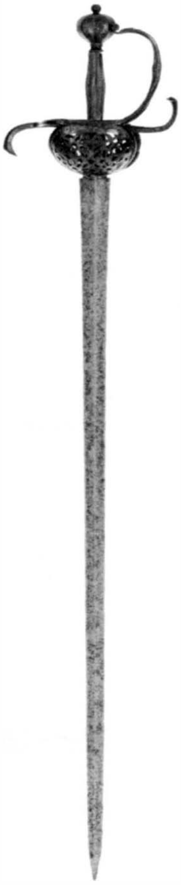
Before and in the early years of Gustavus Adolphus's reign, from at least 1608 to 1616 (from which years records exist), the Stockholm arsenal also contained a small number of sabres. Since the number was largest in 1608 (386 sabres and 103 sabre blades), when a consignment of an additional 197 sabre blades was brought into the arsenal, sabres were probably most common early in the period. Later they fell out of use. This is supported by the fact that the 1608 consignment of sabres seems to have been the last one to arrive, and in in fact in this year none were distributed.[125] In 1622, the eight regiments at Dünamünde and Riga received a total of only 30 sabres, which strongly suggests that they were not in common military use.[126] A handful were distributed in 1623 and 1624, but not in sufficient numbers to have played a military role.[127] The conclusion must be that sabres were not in general military use under Gustavus Adolphus, unless perhaps personally procured by individuals on the eastern front. This certainly happened. In 1627, Gustavus Adolphus took what was referred to as a Tatar sabre in battle with a Polish hussar, and henceforth he frequently used it on campaigns within the Commonwealth.[128]

---

[123] Alm, *Blanka vapen*, pp.45–6; Seitz, *Svärdet och värjan*, 117. See also Fredholm von Essen, *Muscovy's Soldiers*, p.15.

[124] Seitz, *Svärdet och värjan*, p.134.

[125] Jakobsson, *Lantmilitär beväpning och beklädnad*, pp.414–15.



Officer's rapier, 1620–1640. Blade length 92.8cm, blade width 4.0cm, and total length 113.9cm. (Royal Armoury, Stockholm)

Banners

In the yearly years of Gustavus Adolphus's reign, Swedish infantry colours and cavalry standards commonly retained the characteristics of the previous century in that they consisted of only two colours and were geometrically divided into squares, rhombi, lines, and similar patterns. However, soon Continental influences appeared, not least because suitable pattern books were published in Germany. Besides, when new units were raised quickly, it also happened that they received trophy standards previously taken in battle. As a result, various ornaments including Lady Fortuna, heraldic motifs, mottos in Latin, and royal cyphers began to be used. Under Gustavus Adolphus, the size of the colours became smaller. Until 1620, colours were 3–4m in length. From 1621 onwards, they became smaller, usually square in shape with a breadth and length of 1.5–2m.[129] Cavalry units carried standards of a type known as cornet. The cornet was usually about 50–55cm in breadth and 50–70cm in length and edged with fringe of thread. Based on surviving samples in the Trophy Collection, Stockholm, cornet poles were usually painted, and the cavalry commonly flew their cornet from a fluted lance. Dragoon guidons, finally, had swallowtails. They commonly were about 1m in breadth and 1.4–1.8m in length.[130]

Colours and standards, but also musical instruments, were regarded as important trophies, so they were eagerly captured in battle. It was deemed a disgrace to lose a standard, since a captured standard was a sure sign of defeat. However, the loss of standards and musical instruments also made it difficult to gather and reorganise the survivors of a unit, since standards and music was important means of leading a military unit.

Regimental Music

A Swedish infantry unit contained drummers and pipers, while cavalry units included kettledrummers and trumpeters. When possible, a cavalry

---

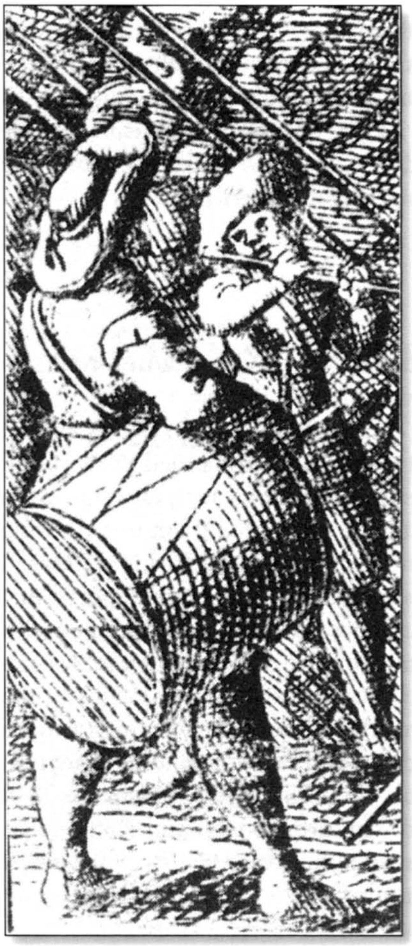
[126] *Ibid.*, p.458.

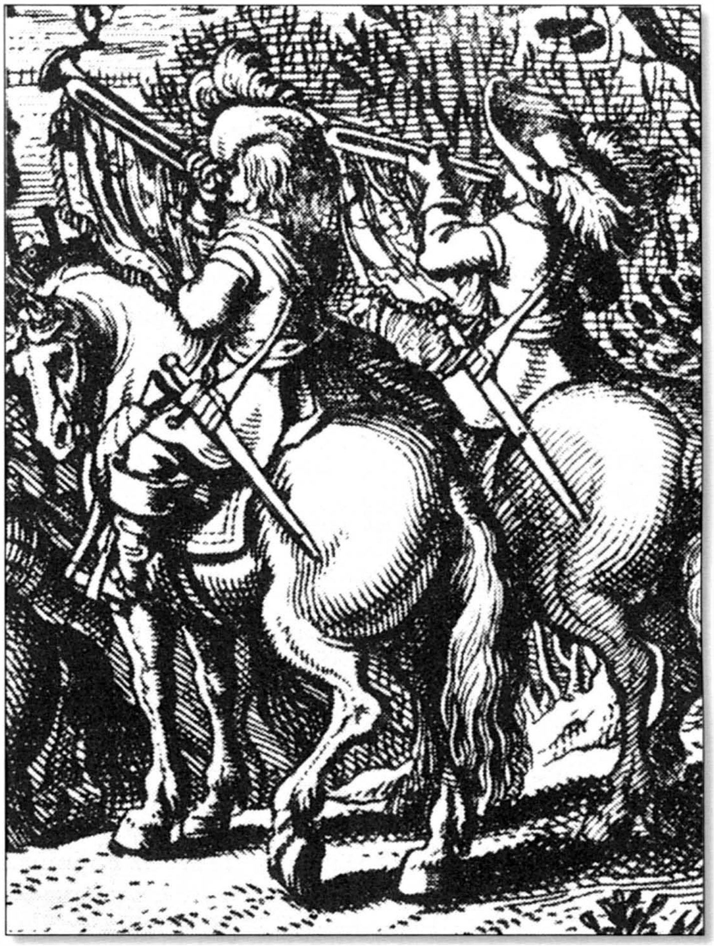
[127] *Ibid.*, pp.419, 424.

[128] Göransson, *Gustav II Adolf*, p.29.

[129] Ericson and Sandstedt, *Fanornas folk*, pp.21–3.

[130] Richard Brzezinski, *The Army of Gustavus Adolphus 2: Cavalry* (London: Osprey, Men-at-Arms 262, 1993), pp.39, 41.





trumpeter rode a piebald. Back in 1594, when the Drabant Guard participated in a parade on foot, they employed kettledrums hung on the back of a soldier and played by the man behind him.[131] This practice may have continued later as well. The music played an important role in maintaining order, since they could be used for signalling on the field of battle and elsewhere. No doubt, the music was also intended to reinforce the men's morale both in battle and on the march.

Furthermore, the drum was used to call out the men for religious service. In Germany, Gustavus Adolphus himself is known to have occasionally strapped on a drum, then walked through the camp to call his men to service.[132]

A series of Swedish cavalry trumpet signals from the Thirty Years' War have been preserved by pure chance. In November 1632, the little northern Saxon town of Delitzsch found itself under threat from an Imperial infantry unit. By a fortunate coincidence, a Swedish cavalry officer, a trumpeter, and three cavalrymen were passing through with letters from Stralsund to the King. As

Above, left: drummer and piper, Swedish attack on the Spanish cavalry outside Oppenheim, 1631. (***Theatrum Europaeum***)

Above, right: Cavalry trumpeters, Swedish entry into Frankfurt-am-Main, 1631. (***Theatrum Europaeum***) the Imperial troops prepared to enter the town, the Swedes responded by having the trumpeter sound the Swedish signals from the town wall. Recognising the signals and drawing the erroneous conclusion that the town had a full Swedish garrison, the Imperial troops withdrew. In gratitude of their deliverance, the townsmen continued to play the Swedish signals every Saturday into the twentieth century, which preserved the signals for posterity.[133]

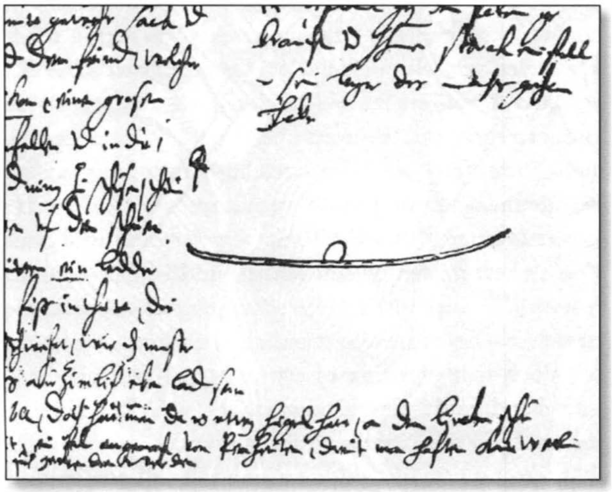
---

[131] Göransson, *Gustav II Adolf*, p.217.

[132] Ahnlund, *Gustav Adolf*, p.107.

Skis

No description of the Swedish army would be complete without mentioning the use of skis when snow conditions permitted. When John of Nassau in 1601–1602 commanded the Swedish army, the exotic skis made such an impression on him that he documented them in a drawing with accompanying text. Skis had been used in previous wars, and there are reports that Gustavus Adolphus brought men equipped with skis from the province of Norrbotten in Sweden and Narva in Estonia for the campaigns in the Commonwealth.[134] Many men from northern Sweden and Finland knew how to use them. In the previous century, Finnish ski-troops had been armed with arquebuses, and in the reign of Gustavus Adolphus, they likely carried either arquebus or musket.[135]



John of Nassau's description and drawing a Swedish ski. (Staatsarchiv Wiesbaden, Abt. 174 K 924, Altes DillenburgerArchiv fol.123)

---

[133] Reprinted in Langer, *Trettioåriga kriget*, p.222; Rumenius, *Wästgöta Ryttare*, p.167.

[134] Hamilton, *Afhandling*, pp.124–5.

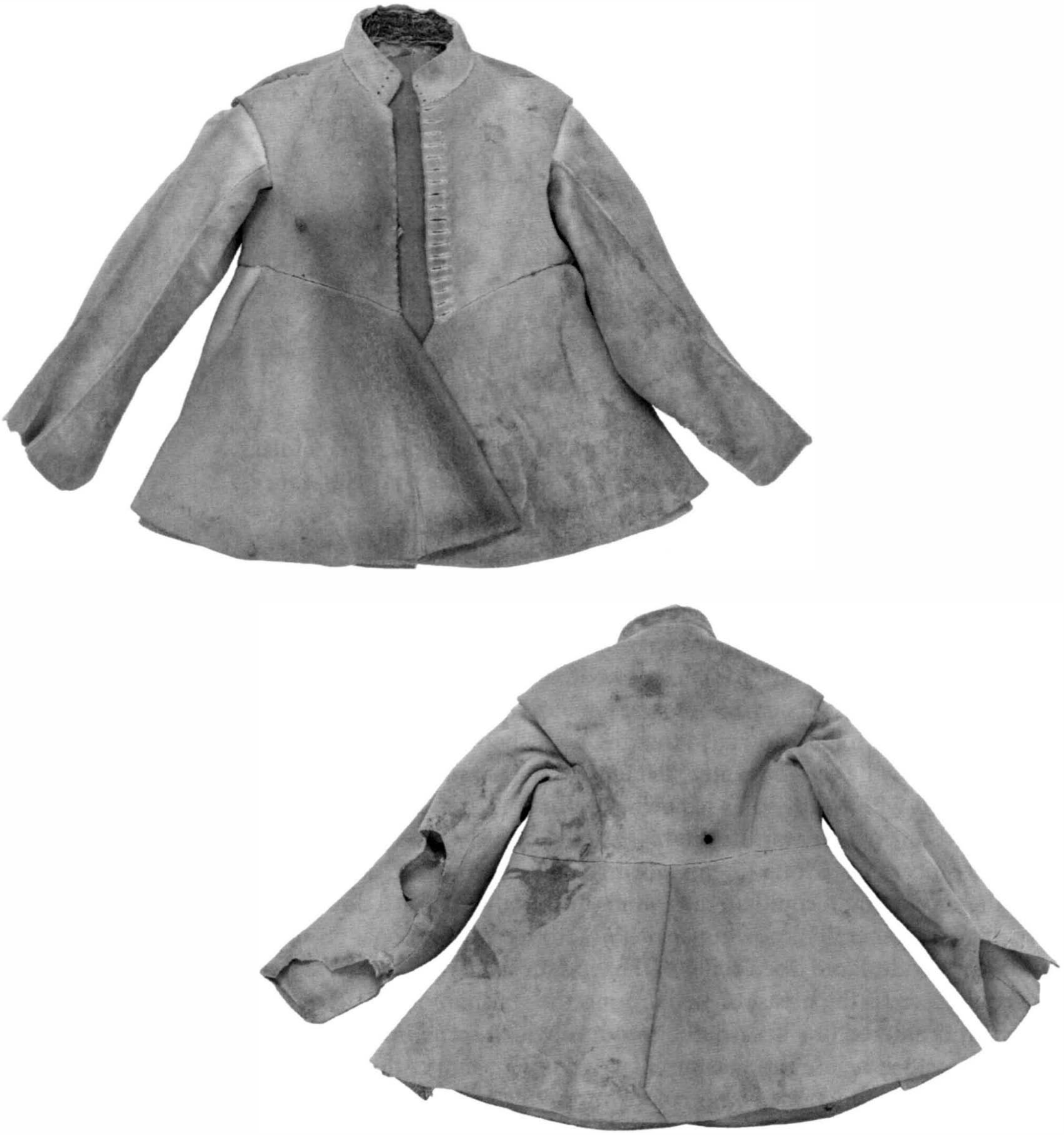
[135] Fredholm von Essen, *Muscovy's Soldiers*, p.59.

5

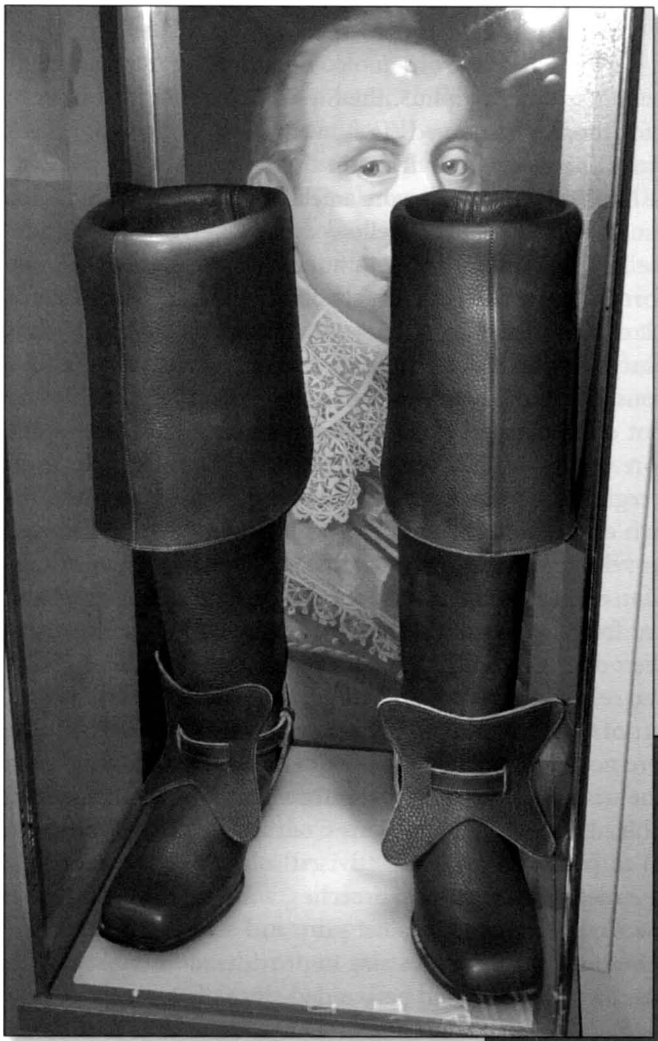
Uniforms, Dress and Appearance

Military Fashion

Although military dress was not yet uniform, the dress of common soldiers had already departed from that of civilian commoners, and differences between the dress of soldiers and other commoners grew more pronounced over time. On the other hand, the field dress and high riding boots of officers during the long war produced an effect also on civilian noble dress. For instance, even on ceremonious occasions Gustavus Adolphus frequently wore a sleeveless buff coat of elk hide with soft sleeves of silk over a more elaborate shirt together with breeches tucked into his high riding boots. On horseback, the upper part of the boots was kept up so as to protect the leg. On foot, it was instead folded down, so that the boot shaft hung loosely around the lower legs. By the early seventeenth century, boots as well as shoes began to be provided with heels, so as to facilitate horse-riding, and this became the standard during the war. In the high riding boots, Gustavus Adolphus and other officers wore long linen stockings decorated with embroidery or lace at the top so that it could be seen when the boot was folded down. Such a stocking was generally known as *strövling*. Above the buff coat an officer would wear a wide, laced linen collar of the type subsequently known as a van Dyke collar. Across the breast or tied around the waist an officer frequently wore an embroidered or silk sash, the colour of which sometimes indicating the army in which he fought. During the reign of Gustavus Adolphus, there was not yet any standardised sash colour in the Swedish army. A low grey or black wide-brimmed felt hat completed the ensemble. Swedish hats were particularly wide-brimmed and low, in the style that in Germany became known as 'Swedish hat' (*Schwedenhut*). An officer would add a plume that hung from the rear of the hat, like a fox tail (à la renard). Gustavus Adolphus wore his hair short with a moustache and goatee (of the type later known as a van Dyke) and shaved all hair on the cheeks. However, during the 1620s longer hair became fashionable, including *cadenettes*, that is, braids of hair hanging on either side of the face (à la cadenette).

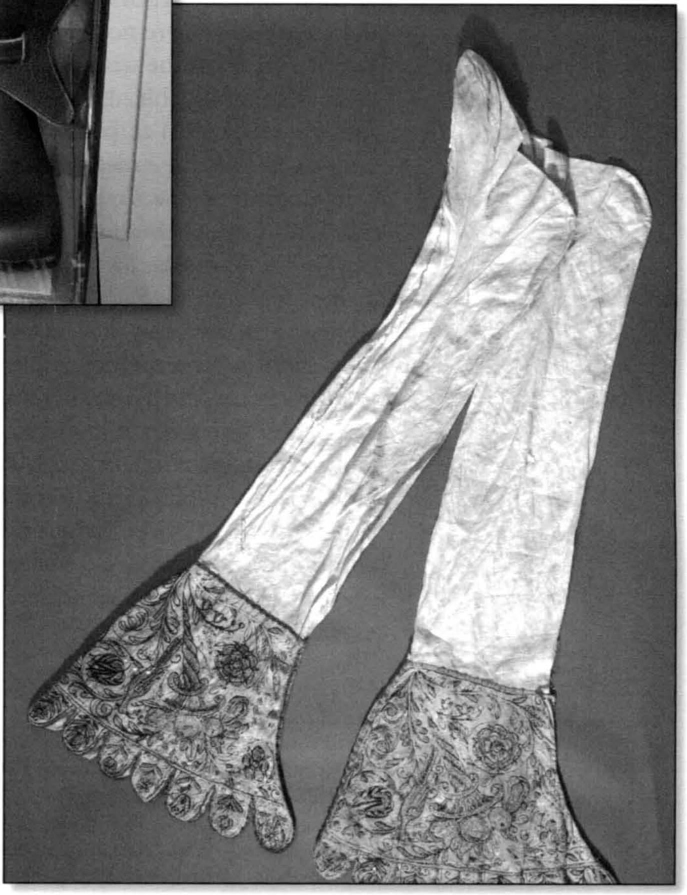


Buff coat of elk hide with green lining worn by Gustavus Adolphus at the battle of Lützen, 1632. The thickness of the hide varies from 6-8mm in the skirts to 2–4mm in the sleeves. The King used English buff coat makers, and this particular buff coat was possibly made in 1630 by an English buff coat maker in Germany. The buff coat was handed over as a trophy to Emperor Ferdinand II, and the house of Habsburg retained it until 1920, when Austria returned it to Sweden in recognition of the services provided by the Swedish Red Cross for Austrian prisoners of war during the First World War. (Royal Armoury, Stockholm)



Above: Modern reconstruction of Gustavus Adolphus's boots, battle of Lützen, 1632. (History Museum, Stockholm; photo: Author)

Below: Linen stockings used by Gustavus Adolphus, battle of Lützen, 1632. (Royal Armoury, Stockholm)



Uniforms

During the reign of Gustavus Adolphus, the Swedish royal court began to introduce liveries for those who served. They were in the yellow and black of the House of Vasa. This was also evident in the uniform of the Drabant Guard. In 1617, the Drabant Guard still wore an elaborate dress that included a collar in the Spanish style, a probably yellow satin jacket, breeches, and a buff coat. When the Drabant Guard in 1624 under the name Drabant or Life Guard Company formed the core of the Household Regiment, some received yellow, others black dress. All also wore buff coats. Officers of the unit wore different colours, including red, blue, and white. Under-officers wore blue dress. When the Household Regiment went on campaign in 1625, new clothes were distributed but of unknown colour. It remains unknown whether the entire unit then wore yellow and black, like the Drabant Company. However, in 1626 the entire regiment received new dress, and the regiment from this time became known as the Yellow Regiment, which suggests that the base colour indeed was yellow. From 1628 onwards, the Life Guard wore grey coats with silver trim, on top of which was added a (probably sleeveless) buff coat when in battle.[1] In 1631, the pikemen of the Life Guard wore expensive buff coats under their cuirasses. Otherwise, they were dressed and armed as other pikemen.[2] The rest of the regiment retained the yellow uniforms.[3]

In the early years of Gustavus Adolphus's reign, common soldiers outside the guard units were not uniformed and were often permitted to wear what they could afford or wished. This practice continued among many enlisted professional units hired during the war. Hans Conrad Lavater of Zürich, in his *Handbook of War*, published in 1644, advised soldiers to wear sensible clothes, by which he meant strong shoes, breeches, and stockings, two thick shirts, a buff coat, a cloak to protect against rain, and a wide-brimmed felt hat. The clothes should be of a generous size to provide additional warmth, but furs and unnecessary seams should be avoided since they were breeding-grounds for vermin.[4]

The situation was not necessarily the same for conscripts. With the introduction of perpetual soldier's holdings, the peasants were expected to provide clothes to the soldiers in times of peace and when departing for a campaign. The Crown assumed this responsibility for the rest of the war. However, many soldiers received inferior clothes, or else the clothes were embezzled. In 1630, the Crown accordingly assumed the responsibility to provide all clothes, including shoes and stockings, in exchange for an additional tax on the peasants who supplied the men.[5] Clothes were made of cloth. Common soldiers, including in the cavalry, were unlikely to receive expensive buff coats.

---

[1] Bellander, *Dräkt och uniform*, p.81; Göransson, *Gustav II Adolf*, p.219.

[2] Jägerhorn, *Hårdast bland de hårda*, p.34.

[3] Bellander, *Dräkt och uniform*, p.102.

[4] Parker, *Thirty Years' War*, pp.191–2; citing Hans Conrad Lavater, *Kriegs-Büchlein: Das ist grundtliche Anleitung zum Kriegswesen* (Zürich, 1644; 2nd edn 1667).

[5] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.388; Bellander, *Dräkt och uniform*, p.82.

Jackets and breeches were usually made from the same cloth, which meant that they were of the same colour. However, there were frequent shortages in cloth supplies. In 1620, a letter to the King explained that 'cloth for the soldiers will not be sufficient for all companies'. Yet, by this time Gustavus Adolphus had begun to insist on uniform dress – not within his army, but if possible, within each unit. The letter went on to inform that, for the infantry, 350 jackets (Swedish: *redjacka*, a jacket or short coat sometimes translated as *colobium*, a tunic) had been sent to the Småland Regiment; 100 jackets to the Västergötland Regiment, at least the latter with yellow and blue trim; 350 jackets to the Östergötland Regiment, of combined cloth and yellow trim; 250 jackets to the Uppland Regiment, with yellow and black trim (the colours of the House of Vasa); and also some jackets to the Norrland Regiment; but 'the cloth had not been enough for more'.[6]

In 1621, Gustavus Adolphus ordered the conscripts not to arrive 'in their peasant garb and with their long jackets' since there were many foreigners in Stockholm who 'might spread spiteful talk that would cause the realm the greatest despair and harm.' Gustavus Adolphus went on to note that it was not the quality of the cloth but the cut that was most important to win renown.[7] It was not only conscripts were arrived in peasant garb; many enlisted Scots and Irishmen, too, were shipped to Germany in their civilian clothes, which meant that quite a few arrived in tartan plaids. All were given proper military clothes as soon as they were available, since no officer wanted his men to wear peasant garb.

In 1622, Gustavus Adolphus decreed uniform dress for each regiment and company. However, the decree could not be carried out. In 1624, the entire Commanding General's Regiment (Jacob De la Gardie's Regiment) received a field uniform consisting of dark blue coats with broad yellow trim, and in 1625, the Life Guard Company received black and yellow clothes, with trim in the same colours on their partisans.[8] Gustavus Adolphus continued to make efforts to dress the army in proper and, he hoped, uniform military dress. In 1626, he ordered new clothing both to the national and the enlisted foreign soldiers, including clothes of a 'variety of colours' which were described as follows: 'Hungarian jackets, which must reach halfway down the breeches, after which the breeches should narrow below the kneecap, and with accompanying stockings.' Gustavus Adolphus asked for blue cloth with red trim in the seams, or else red cloth with some other suitable colour as trim.[9] The term Hungarian jacket is believed to have signified a casack, an outer upper garment which was popular with soldiers.[10] However, it is unclear exactly what it looked like. The casack may have been of tunic form, with short sleeves or shoulder pieces and open at the sides, that is, a tabard-like coat. Such cloaks had a long history as working garments and should not

---

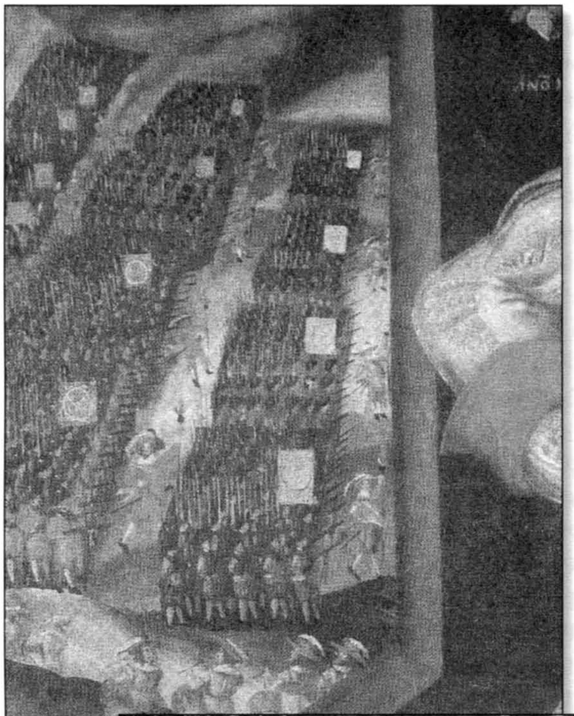
[6] Letter to the King, dated 24 September 1620 (O.S.); cited in Jakobsson, *Lantmilitär beväpning och beklädnad*, pp.385–6.

[7] Letter dated 4 May 1621 (O.S.); cited in Jakobsson, *Lantmilitär beväpning och beklädnad*, p.386.

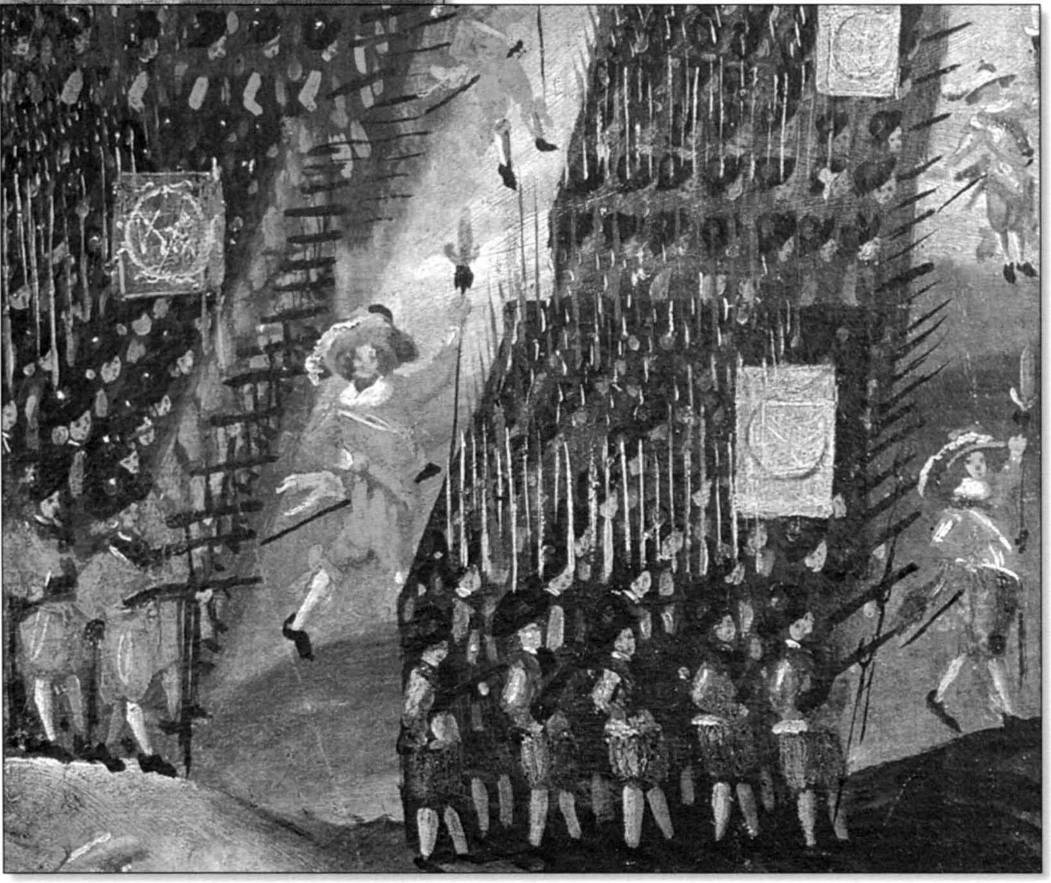
[8] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.386.

[9] *Ibid.*, p.390.

[10] Bellander, *Dräkt och uniform*, p.77.



Below (magnification of larger image, left): The Norrland territorial regiment, 1626. The complete painting depicts all 24 companies. The companies display some variation in dress. The soldiers wear baggy breeches of an older type, which did not narrow below the knee. Some wear helmets, other hats. The men in a company wear uniforms of the same type and colour. The musketeers wear red jackets and breeches with white stockings, or blue jackets (with slit sleeves) and trousers with red stockings. One musketeer wears an entirely red dress with both breastplate and helmet. The officers wear doublets that look suspiciously like the type with an exaggeratedly padded stomach that is generally referred to as a peascod belly or goose belly, which already a few years earlier had gone out of fashion elsewhere, and plumed hats. The officers with the companies that wear red are themselves dressed in red with white stockings, while the officers with the companies that wear blue are themselves dressed in red jackets and grey-brown breeches with red stockings. All officers were white lace, black shoes, and grey, plumed hats. The pikemen wear red jackets and armour. The musicians wear yellow-brown buff coats, red breeches, white stockings, black shoes, and grey hats with white plumes. (1626 painting by Nicolas de la Fage, in Karlberg Castle; photo: Medströms)



be confused with the elaborate dress emblazoned on the front and back that was used by heralds. Besides, the word casack by this time may have meant no more than a coat.

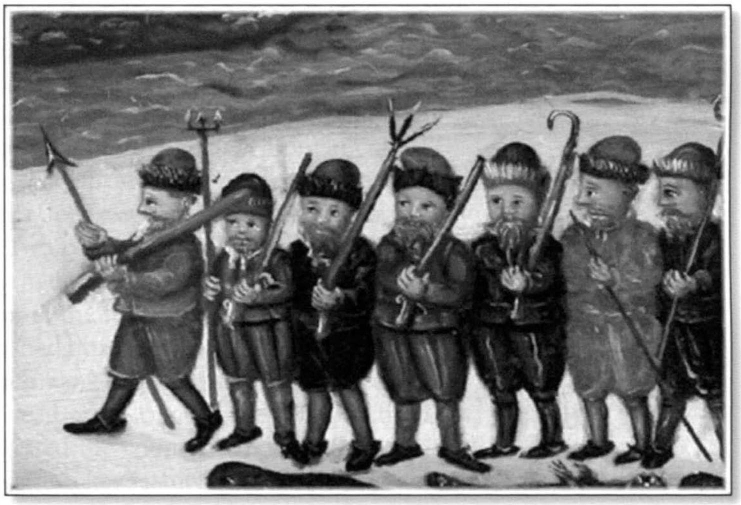
From the end of the 1620s, breeches changed. Previously breeches, which reached down just below the knee, had been quite baggy. Henceforth, the lower part of breeches was made in a tighter fit than in the past and they also were tied up with a bow just below the knee.

There was no attempt to provide a standard uniform colour for the entire army. To the contrary, Gustavus Adolphus's request for a 'variety of colours' suggests that the idea was for regiments to have different colours, so that they more easily could be distinguished from one another on the battlefield.

Winter Clothes

Sweden being a northern country, winter clothes were required when it was cold. The Crown requested all governors supply winter clothes to all soldiers in the form of fur coats and woollen stockings. In May 1622, Gustavus Adolphus repeated this instruction, asking every eight peasants jointly to contribute one fur coat, and every two to provide a pair of woollen stockings and a pair of shoes.[11] At this time, stockings were generally sewn. Similar demands for winter clothes followed in subsequent years.[12] In 1631, the brigades in the camp at Schwedt received jackets that were of the same style (but possibly not the same colour) within each brigade and for winter use were fitted with fur lining, which made the previously used fur coats obsolete.[13]

By 1628 if not before, men in Swedish service might, instead of a hat, wear the *karpus*, a round woollen cap with flaps that could be turned down to protect the eyes, ears, and neck. This kind of headgear was found on the warship *Wasa*, which was shipwrecked in 1628. Army use of the *karpus* is known from 1635.[14] It is likely that this style of headgear was older. In winter, the *karpus* might be fur lined. The latter type of *karpus* for winter use was, for instance, illustrated in a painting from 1618 as the headgear of Gotland seal-hunters.



Gotland seal-hunters, 1618. Swedish soldiers in winter gear probably looked very similar. (Kutatavlan, Fårö Church)

Although the Swedish army began the war well-provisioned with clothing and uniforms, soon shortages appeared. Besides,

---

[11] Jakobsson, *Lantmilitär beväpning och beklädnad*, p.388; citing a letter dated 2 May 1622 (O.S.).

[12] *Ibid.*, p.388.

[13] *Ibid.*, p.90.

[14] Bellander, *Dräkt och uniform*, p.101.

Gustavus Adolphus in 1631 complained that some of the fresh recruits sent to him were so badly dressed that they essentially were 'naked'.[15] In addition, clothes would wear out, which meant that they had to be replaced by items purchased or plundered from the civilian population or taken from dead soldiers, whether enemies of friends. This tended to result in a variety of dress items within the same unit. At the battle of Breitenfeld, both Swedes and Saxons placed 'greene branches in their hats or helmets' so as to distinguish themselves from the enemy.[16]

---

[15] Bellander, *Dräkt och uniform*, p.107.

[16] *Swedish Intelligencer* vol. 1, p.122.

6

Tactics and Strategy

Tactical Doctrines

By the early seventeenth century, Western military organisation, armament, and tactics typically followed one of two models: the Spanish and the Dutch. The older model was the Spanish, which from the outset was characterised by its use of solid squares of pikemen, each with a strength of 2,000 men or more formed in what was known as a Spanish square (*cuadro*), supported by flanking units of musketeers. Abroad, the formation also became known as a *tercio* formation. In reality, the *tercio* was an administrative unit for raising troops akin to a regiment. The Spanish model, in its original form, provided a strong offensive capability and was good for all-round defence should a flank be turned. However, the formation was slow and clumsy with regard to battlefield mobility, and since its musketeers were deployed on the flanks, its firepower could not be concentrated in one direction.

In contrast, the Dutch model, introduced in the years between 1590 and 1610 by Maurice of Nassau (1567–1625), eventually Prince of Orange, and his cousins William Louis (1560–1620) and John of Nassau (1561–1623), relied on much smaller tactical units, battalions, each of which officially (but not in practice) consisted of 550 men in imitation of the ancient Roman cohort. On the field of battle, the battalions would form up in a linear formation, typically 10 but frequently only six ranks deep, each with pikes in the centre and musketeers on each side of them. Two or more battalions would form a regiment. The army as a whole would form up in two to three lines. The Dutch model was designed to exploit firepower to the fullest extent, since it allowed all musketeers to fire. This was accomplished by rotation of ranks, an evolution known as the countermarch, with each rank firing a simultaneous salvo. William Louis of Nassau, who in 1594 read an account of the drill practised by the ancient Roman army, then suggested the countermarch in a letter to his cousin Maurice. Soon enough, it became a key feature of the Dutch model.

The battalion was easier to manoeuvre on the battlefield than the Spanish square. In addition, its proportion of officers and under-officers was larger. The model thus offered greater mobility, defined as rapidity of movement and ease of manoeuvre, although it was far more vulnerable to flank and rear attack. The Dutch model primarily used the rotation of ranks of musketeers defensively. Having fired, each rank retired to reload while the next rank took its place.

However, the linear formation lacked the offensive capability of the old Spanish formation. The Dutch model focused on mobility and firepower rather than shock. Moreover, neither the Spanish nor the Dutch model provided a significant role to artillery and cavalry. Artillery was typically dispersed along the front of the line of battle. Artillery could be moved only slowly, or not at all, so may change hands if overrun by the enemy, and if not spiked, be turned against its former owners. If the fortune of battle then turned, the artillery might change hands several times in the same battle. Cavalry operated in tactical units known as squadrons, each several hundred strong, which typically employed caracole tactics.[1] This meant that the cavalrymen would advance in deep formation, at less than a gallop. As each rank came into range, the men would discharge their carbines or pistols, then wheel to the left (most commonly, since the horseman was firing with the right hand), retire to the back of the formation to reload, and in due time repeat the manoeuvre. The whole unit might move slowly forward as each rank fired, or slowly retreat to keep its distance to an advancing enemy. It has been argued that the caracole was less significant for its practical use than for the drill itself, which integrated the horsemen in a tactical body governed by discipline, not by each man's individual fighting skill.[2] The cavalrymen were armed and sometimes armoured for melee, and the intention usually seems to have been to follow the caracole with a charge, in effect using the caracole to soften up the enemy. Nonetheless, infantry musketeers enjoyed a much greater range and more reliable fire than the wheellock pistols of most cavalry, so the cavalry usually kept a respectful distance.

Both artillery and cavalry were accordingly relegated to what in effect was a support role. In both the Spanish and Dutch model, the infantry was regarded as the chief means of winning a battle. Besides, warfare came to focus more on outmanoeuvring the enemy in an extended campaign than on defeating him in a major battle. Campaigns for this reason also tended to focus on fortified positions, since to deny the enemy an important stronghold was a means of wearing him down. Besides, during the siege there was finally an opportunity to fully utilise one's artillery.

Gustavus Adolphus's Theoretical Background

Gustavus Adolphus's tutor Johan Skytte had acquainted the young King with the classic works on tactics by Aelian, Frontinus, and Vegetius, but also contemporary studies on statecraft and tactics such as those by the Flemish philosopher and historian Justus Lipsius (1547–1606). In addition, Gustavus Adolphus studied Swedish military history, including, we may assume, the attempt in the early 1560s by his uncle Erik XIV to introduce the Spanish model. He gained a thorough knowledge of both the contemporary Spanish and Dutch models.[3]

---

[1] A term meaning 'snail' (Spanish: *caracol*), translated into German as *Schnecke* and into French as *limaçon* (ultimately from Latin *limax*, 'snail'). Previously, before the introduction of the countermarch, the tactics was also used by infantry. Hans Delbrück, *History of the Art of War* vol. 4: *The Dawn of Modern Warfare* (Lincoln: University of Nebraska Press, Bison Books, 1990), p.123. On the caracole, see Schildknecht, *Harmonia* vol. 3, pp.168–9; Wallhausen, *Kriegskunst zu Pferdt*, Book 2 (Frankfurt-am-Main: Johann Theodor de Bry, 1616), p.65 (describes its execution without using the name); *Sveriges krig*, Suppl. Vol. 2, pp.149–51.

[2] Delbrück, *Dawn of Modern Warfare*, p.124.

For a variety of reasons, including, we can assume, political and religious ones, Gustavus Adolphus concluded that the Dutch model was the most suitable for Swedish conditions. Already in 1601–1602, John of Nassau had visited Sweden. Given command of the Swedish army, he provided some ideas on how to reform organisation and tactics. Gustavus Adolphus, then eight years old, met John at least once, upon his departure from Sweden. Five years later, in 1607, Gustavus Adolphus first met his future major general, Dodo von Innhausen und zu Knyphausen, who previously had been in Dutch service and thoroughly knew the Dutch model. In 1608, 14 years old, Gustavus Adolphus spent two months of intensive training in the Dutch model under Jacob De la Gardie, who himself had been trained in its use in the Dutch Republic while he served as a colonel there. This ended Gustavus Adolphus's formal training. However, he continued to read and observe, and moreover, in 1611 the outbreak of the Kalmar War obliged him henceforth to assume a leading role in warfare. He did not give up theoretical studies, and read the recently published treatises on war by Johann Jacobi von Wallhausen (*Kriegskunst zu Fuß*, 1615) and Marius Savorgnanus (*Kriegskunst zu Wasser und Land*, 1618). He may also have studied a work by Giorgio Basta (*Il maestro di campo generale*, 1616; if so, probably the German edition of 1617). Meanwhile, Gustavus Adolphus discussed warfare with many experienced officers and corresponded by letter with others.[4] In 1618, he travelled incognito to Germany to study conditions there. Gustavus Adolphus again visited Germany in 1620, primarily to woo Maria Eleonora of Brandenburg, the daughter of John Sigismund, Elector of Brandenburg. However, he also made good use of the opportunity to renew his acquaintance with John of Nassau, then in Heidelberg. Gustavus Adolphus's personal attendant, Ensign Johan Hand, described in his diary how the two young Swedes 'followed Count John of Nassau into his chamber. There he showed us with small cards of paper how he wanted to deploy an army for battle, and how he considers a regular fortress should be built.'[5] Having discussed the theoretical aspects of military science by moving cardboard units across a table-top, Gustavus Adolphus followed up by inspecting the Count's arsenal.

Notably, Gustavus Adolphus also studied the Spanish model, including the works of those, like Basta, who aimed to modernise and reform the Spanish square. During the Thirty Years' War, many proponents of the Spanish model, including Tilly, customarily deployed the squares (which by then had been reduced in size) in groups of three, in an arrowhead- or wedge-shaped formation, or even four, in a diamond-shaped formation. A number of such three or four groups were then deployed in a linear formation. The brigade system which Gustavus Adolphus developed bears a striking resemblance to this improved Spanish formation, and it seems likely that he had been influenced by it as a means to reinforce the inherent weakness of the line of Dutch battalions. In other words, Gustavus Adolphus's brigade consisted of components and concepts taken from both the Dutch and Spanish model.

---

[3] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.68–9.

[4] Barkman, *Gustaf II Adolfs regementsorganisation*, pp.70, 72–3.

[5] Entry for 28 May 1620 (O.S.), *Johan Hands dagbok under K. Gustaf II Adolfs resa till Tyskland 1620* (Stockholm: Historiska handlingar 8:3, 1879), pp.1–39, on p.32.

The Availability of Existing Officers

Based on his studies as well as practical experiences, we have seen that Gustavus Adolphus early on saw the need to bring the Swedish army up to modern standards and reform its organisation, armament, equipment, and tactics. For this task, he was fortunate in having in his army a number of experienced soldiers who had fought in the long period of wars under the previous kings, John III and Charles IX. Already by the late sixteenth century, the majority of native officers in the Swedish army (captains, lieutenants, ensigns, and indeed sergeants) were already highly professionalised in everything but theoretical education. They were certainly no less professional than the native officers of the French or Spanish army. First, they were experienced in the military position they held. By 1590, 77 percent of native infantry captains and 62 percent of cavalry captains had served in their present rank for three years or more. In addition, most or all would have served in junior ranks for some time before being promoted to captain. Besides, 35 percent of all infantry captains and 31 percent of all cavalry captains had, in fact, served for 11 years or more, and most of this time had been spent at war. This fortunate situation endured. By 1610, 63 percent of native infantry captains and 71 percent of cavalry captains had served in their present rank for three years or more. By then, 29 percent of all infantry captains and eight percent of all cavalry captains had served for 11 years or more.[6] The latter figure can be explained that by this time, a far higher share of cavalry officers (48 percent of the total) were of foreign origin. The number of foreign infantry officers had risen too, but not as dramatically, to 27 percent. The foreign officers had, of course, not served for as long in the Swedish army, but they often had gained considerable experience elsewhere.[7] There was accordingly no need to build an army from scratch. A professional core already existed.

Yet, the tactical innovations introduced by Gustavus Adolphus demanded additional practical training. Such training was mandatory, even for veterans and nobles of high birth who held military command as company or regimental officers.[8] Previously, nobles had fundamentally been self-trained. This meant that the men's personal martial capacity varied considerably, with those of a military bent being far more proficient than those who merely served to uphold family tradition. Moreover, neither would be proficient in operating as a unit, since they hardly ever trained in formation. They served as cavalry since they were nobles, but their ability depended on individual prowess, not unit training. There had then been no training depots for new recruits and no institution of military training for new officers.

---

[6] Artéus, *Till militärstatens förhistoria*, p.36.

[7] *Ibid.*, pp.47, 50.

[8] *Ibid.*, p.68.

Under Gustavus Adolphus, all this changed. Every man was given rigorous training in the new tactics. This was made possible by the increased number of officers and under-officers. The King was known to instruct the troops himself. Units raised abroad were made to watch, and then practice, the new tactics, too. The arduous training continued throughout the war. At Munich, in May 1632, Gustavus Adolphus 'held a generall Muster before the City: himselfe (to shew some content to the *Bavarians*) drilling and exercising his souldiors: teaching them especially how to give a Charge or *Salvee*; some upon their knees, others behind them stooping forward; and the hindmost ranke standing upright, and all to give fire at once, the hinder man over his foremans shoulder.'[9]

As usual, Gustavus Adolphus personally instructed the troops. He would dismount from his horse to show them how to fire musket standing up, kneeling, and even lying down.[10] It was not only tactics that changed. As noted, armament was modernised as well. This combination proved its value in Livonia and Prussia. As a result, the army that the King eventually brought to Germany was better equipped and trained, yet no less experienced, than any previous one. In addition, by then more officers had a theoretical military education than in the past (when theoretical military studies were fundamentally unknown in Sweden).[11]

What was the origin of the foreign officers? Most were Germans, either from the Continent or the eastern side of the Baltic. Indeed, it is often difficult to distinguish in the records between Baltic Germans who were born as Swedish citizens and those who technically were foreign nationals. The second largest group consisted of the Scots, English, and Irish. This group was followed in numbers by a mixed group of Frenchmen, Walloons, Swiss, Italians, and Spaniards, and a slightly smaller group consisting of men of Dutch, Frisian, or Flemish origin. Men of other backgrounds served too, including some Poles, Muscovites, Hungarians, and the occasional Dane or Norwegian.[12] It is obvious that Lutheran faith was not a prerequisite for service in the Swedish army, despite its insistence on *attending* Lutheran sermons. It is also obvious that the Swedish army sought different types of military expertise in different foreign regions. By 1610, 67 per cent of foreign cavalry captains were of German or Baltic German origin, 17 percent were Scots, English, or Irish, 16 percent had a French, Walloon, Swiss, Italian, or Spanish background, and only the occasional individual was of Commonwealth, Muscovite, or Hungarian origin. In comparison, by 1610, 56 percent of foreign infantry captains were of German or Baltic German origin, 32 percent were Scots, English, or Irish, six percent Dutch, Frisian, or Flemish, five percent had a French, Walloon, Swiss, Italian, or Spanish background, and, again, only the occasional individual was of Commonwealth, Muscovite, or Hungarian origin.

---

[9] *Swedish Intelligencer* vol. 2, p.169.

[10] At Munich, 'il fit faire l'exercice à diuers de ses regimens hors de la ville. On y admira& sa dexterité és ordres qu'il donnoit, & plus la patience qu'il prenoit de descendre luy-mesme de cheual, se mettre en teste de ses trouppes, prendre unmousquet sur les espaules, leur monstrer comme il falloit tirer de compagnie, ou le genoüil, ou le ventre à terre, & se mettre promptement en toutes sortes de postures militaires. En somme on voyoit que le Royestoit de tous mestiers, & n'ignoroit rien'. *Le soldat svedois ov Histoire de ce qui s'est passé en Àllemagne depuis l'entrée du Roy de Suede en l'année 1630 jusques apres sa mort* (np: 1633), p.285.

[11] Artéus, *Till militärstatens förhistoria*, p.69.

[12] *Ibid.*, p.87.

It is thus clear that officers of Scots, English, or Irish origin were more likely to serve in the infantry. Those of Dutch, Frisian, or Flemish origin only served in the infantry (or, coincidentally, in the navy, which hosted many officers of Dutch origin). In contrast, officers of French, Walloon, Swiss, Italian, or Spanish origin were far more likely to serve in the cavalry.[13] There was a reason for enlisting so many foreign officers for the cavalry. At the beginning of Gustavus Adolphus's reign, Sweden's native cavalry force was still based on the nobility, so the available manpower was insufficient. A new source of cavalry officers was required, and for this foreign nationals were enlisted.

The Swedish Model

The wars in Livonia and Prussia were different in character from the previous border wars with Muscovy. During the Muscovite wars, terrain had been difficult, roads poor or non-existent, and guerrilla warfare and raiding common. However, Livonia and in particular Prussia had open fields and meadows of a type that was uncommon in Karelia, Ingria, and Muscovy.

Until the reign of Gustavus Adolphus, early modern Swedish kings (with the single exception of Erik XIV) had regarded the cavalry as the primary combat arm. Unlike the infantry, which was levied, the Swedish cavalry was raised on a voluntary basis, in exchange for freedom from taxation, noble status, and land. There was a reason for this beyond noble status, since most campaigns were fought on the border with Denmark in the south and Muscovy or the Polish-Lithuanian Commonwealth in the east. The Danish-Swedish borderlands were characterised by difficult terrain which brought its own particular tactical problems, but in the east, cavalry retained a key role in warfare.

In contrast, the young Gustavus Adolphus, influenced by the Dutch model of warfare, began to experiment with infantry. He continued until the end of his life to regard the infantry as the primary combat arm. Nonetheless, during his campaigns in the Commonwealth, Gustavus Adolphus learnt the value of having a hard-hitting cavalry force as well. At the same time that the Commonwealth increased its number of infantry, in response to the efficiency of the Swedish infantry, Sweden raised the proportion of cavalry. By the time of the battle of Dirschau in August 1627, Gustavus Adolphus had significantly increased the proportion of cavalry in his field army, changing the ratio of infantry to cavalry in his field army to 3:2. More was to come. At the battle of Górzno in February 1629, the ratio of infantry to cavalry was 2:3.

---

[13] *Ibid.*, p.89.

The Swedish model as established by Gustavus Adolphus was a combined arms model, in which the key arm, the infantry, acted in unison with the cavalry and field artillery. Gustavus Adolphus aimed for a combination of hitting-power, mobility, and defensive strength. Hitting-power was achieved through firepower (musketeers and regimental artillery) in combination with shock (charging pikemen and cavalry). Mobility was assured by the army's superior organisation and training. The army's defensive strength was the result of the combination of hitting-power and mobility, since it allowed the army to close with the enemy rapidly and thus avoid excessive losses from the opponent's firepower.

Infantry Tactics

The Swedish model emphasised the offensive to a much higher degree than the Dutch model. Gustavus Adolphus combined three or four battalions into a larger formation, a brigade. The brigade was sufficiently strong to resist a Spanish square or to attack such a formation. Yet, due to its composition of smaller tactical units (battalions), the brigade enjoyed the mobility and flexibility of the Dutch model. With a strength of 1,500 to 2,000 men (depending on whether it consisted of three or four battalions), the brigade was stronger than the Spanish square, as it then had developed, and significantly superior to the Dutch battalion. The brigade was superior to both the Spanish square and the Dutch battalion in firepower. In mobility, the brigade was superior to the Spanish square and the equal or superior to the Dutch battalion, since the brigade had a comparatively larger number of officers and under-officers than the previous units, and since it consisted of clearly defined sub-units. It could move as a single unit, but its sub-units could also act independently. Moreover, the brigade, although developed as a defensive formation, was equally efficient in the offence.

Gustavus Adolphus would typically form up his army in two lines, with the infantry brigades in the centre and the cavalry squadrons deployed in line on each wing. The latter would be supported by infantry musketeers.

Both pikemen and musketeers were already from the outset of Gustavus Adolphus's reforms arrayed in only six lines, probably because the rear lines otherwise could not hear the commands from the front. Monro explained that:

> To exercise a squadron [that is, a battalion] of Musketiers, how strong soever they be, the number of Rancks being no deeper than six, the files being even may be so many as your voice can extend to, ever observing that your Command be given in the Front, otherwise may breede disorder … and above all things, you are to command them to keepe silence, not babling one to another, neither in their motions, to suffer their Armes to rattle one against another …[14]

---

[14] Monro, *Monro His Expedition* vol. 2, p.187.

The musketeers would fire by rotation of ranks, in a form of countermarch, but Gustavus Adolphus used rotation offensively, not defensively. Instead of retiring after firing (fire by extraduction), the musketeers would stop to reload while the ranks behind them moved forward (fire by introduction).

Moreover, the musketeers were trained to fire in volleys (salvoes), several ranks at a time. As the name implies, a salvo was originally a volley fired in salute. Volley or salvo firing was a gradual development. At first, Gustavus Adolphus had two lines fire simultaneously, instead of each firing separately as in the Dutch model. At the time of the battle of Breitenfeld, Gustavus Adolphus had developed his tactics further, henceforth having all musketeers of the same unit firing simultaneously. To accomplish this, the musketeers doubled their ranks, so that they stood only three ranks deep. The first rank would kneel and fire, the second rank would fire stooping forward (from the fork rest, it may be assumed), and the third rank standing. In 1637, Monro described both procedures, as he had learnt them in Swedish service, in his drill manual:

> Advancing to an enemy not being disbandoned, but in one bodie they give fire by Rancks to Rancks, having made readie alike, they advance ten paces before the bodie, being led up by an Officer that stands in even Front with them, the Cannon or mouth of their Muskets of both Rancks being past his bodie. The second Rancke being close to the backe of the foremost, both gives fire alike, priming and casting about their Muskets they charge againe where they stand, till the other two Rancks advance before them, and give fire after the same manner, till the whole Troope hath discharged, and so to beginne againe as before, after the order of the through-countermarch; ever advancing to an enemie, never turning backe without death, or victorie. And this is the forme that I esteeme to be the best ... When you would command the body of your Musketiers to give fire in a *Salve*, as is ordinarie in Battell, before an enemy joyne, or against Horsemen; then you command the bringers up or Reare to double the Front to the right hand, and to make readie, having the match cocked and their pannes well guarded, having closed the three Rancks, though not the Files, the Officers standing in equall Front with the foremost Rancke, betwixt two Divisions, he commands to give fire, one *Salve*, two or three, and having charged againe, and shouldered their Armes, they retire to the left hand againe, every man falling behind his owne Leader.[15]

A description from the battle of Breitenfeld, again as retold by the Scots officers of the Swedish army, explains the battlefield use of the procedure, including the final volley (salvo):

> The *Scots* [of the Swedish army] ordering themselves in severall small *battagliaes*, about 6 or 700 in a body, presently now double their rankes, making their files then but 3 deepe, the discipline of the King of *Sweden* beeng never to march above 6 deepe. This done, the formost ranke falling on their knees; the second stooping forward; and the third ranke standing right up, and all giving fire together; they

---

[15] *Ibid.*, pp.190–1.

> powred so much lead at one instant in amongst the enemies horse, that their ranckes were much broken with it.[16]

An Englishman present at Breitenfeld, Lieutenant Colonel Henry Muschamp (d. 1634, at Nördlingen), gave the following account, which shows that the infantry did not always double their ranks when firing a volley:

> First (sayth he) giving fire unto three little Feild-pieces, that I had before me, I suffered not my Muskettiers to give their volleyes, till I came within Pistoll-shot of the enemy, at which time I gave order to the three first rancks to discharge at once; and after them the other three: which done we fell pell mell into their rancks, knocking them down with the stocke of the Musket, and our swords.[17]

Muschamp's account explains the other two key aspects of Swedish infantry tactics. First, fire was withheld until the enemy was at very short range, so that the volley would have maximum impact. Second, the volley was followed up by a charge.

Following a salvo, the musketeers were vulnerable. The Dutch model regarded the pikemen as a defensive force, which could provide cover for the musketeers as they reloaded. However, Gustavus Adolphus ordered his pikemen to charge into the enemy after a salvo had been fired, to disorganise them further. Then, as the pikemen withdrew, the musketeers were ready to fire again. A volley followed by an immediate pike charge might be devastatingly effective. The light regimental artillery, unlike previous field artillery, followed the infantry as it advanced and provided efficient supporting fire. The Swedish regimental artillery was both more numerous and lighter, that is, more manoeuvrable, than what was in use elsewhere on the Continent. A brigade typically had nine to 12 light cannons. Gustavus Adolphus had learnt the utility of field artillery from the Muscovite and Commonwealth wars. In particular, he aimed to reduce weight to increase mobility by employing smaller-calibre shot. To increase firepower at short range, grape-shot and case-shot became the standard artillery projectiles. Functioning like a shotgun, the use of such projectiles would cause terrible slaughter in close-order infantry. As a result, the brigade's firepower was very strong. In effect, Gustavus Adolphus aimed for a first shock derived from firepower (missile shock) followed by an almost immediate second shock, in the form of the charging pikemen. The effect was considerable hitting-power. The combination of hitting-power and, above all, mobility was decisive for gaining and holding the initiative, and since this reduced the men's exposure to enemy fire, the aggressive tactical behaviour actually worked for their protection, that is, it provided the army's defensive strength.

Furthermore, there are indications that Gustavus Adolphus also introduced platoon fire in a set pattern, as yet another method to avoid leaving the troops vulnerable while reloading. Based on later regulations, the corporalships would then deploy in a line slightly ahead of the pike formation, alternating one forward and one to the rear. The corporalships of the forward line fired first, each in one salvo. As they then reloaded where they stood, the rear corporalships advanced to fire in their turn.[18]

---

[16] *Swedish Intelligencer* vol. 1, p.124.

[17] *Swedish Discipline* vol. 3, p.24.

At Lützen, Gustavus Adolphus ordered Nils Brahe who commanded the centre's first line of infantry brigades not to fire before the enemy did so.[19] This was probably not the first time when such orders were issued, since we will see that the cavalry had received the same instruction already at Breitenfeld, and Muschamp's account from the same battle suggests that the infantry had received it, too. By forbidding the men to fire before the enemy, Gustavus Adolphus prevented them from the temptation of opening fire while still too far away to have the expected impact. To hold fire until this moment took discipline and training, but as long as the enemy was less disciplined and trained, the tactics worked. When both sides were equally well-trained and determined, the result might become a bloodbath, which happened at Lützen. Nonetheless, a generation later, during the Scanian War, the practice was revived and became a cornerstone of Swedish infantry tactics.

Discipline also entailed the ability to stand, or move, in silence. The Swedish army advanced in silence against an enemy. This was necessary to retain the ability to give orders, that is, maintain command and control. Without command and control, Gustav Horn could not have reformed an entire wing so rapidly at Breitenfeld. We have seen that Monro pointed out that no officer could command a larger formation than 'so many as your voice can extend to'.[20] Many units of the Imperial army apparently were not sufficiently disciplined to advance in silence, which must have reduced the ability of their officers to maintain command since their orders might not be heard. Monro noted that Imperial troops shouted 'Sa, Sa, Sa, Sa, Sa, Sa' during the attack.[21] While good for keeping up a fighting spirit, it must have reduced command and control.

The brigade system introduced during the Thirty Years' War was abolished within two years of the battle of Lützen. Turner noted that the brigade formation remained in use 'for one year after the Kings death; but after that time, I saw it wear out when Defensive Arms first, and then Pikes came to be neglected, and by some vilipended'.[22] The intricate brigade formation was essentially a defensive formation. With the Swedish tactical doctrine increasingly emphasising the offensive, for which simpler deployment models sufficed, it was natural that it was abandoned. Moreover, the brigade system depended on well-trained soldiers, which was not always available. The tactical units henceforth became the infantry battalion and cavalry squadron.

---

[18] *An Abridgement of the English Military Discipline* (London, 1676), pp.31–2; cited by Blackmore, *'Destructive and Formidable'*, pp.78–9, Fig. 3.2.

[19] *Sveriges krig* vol. 6, p.433; *Kungl. Svea livgardes historia* 3:1, p.723.

[20] Monro, *Monro His Expedition* vol. 2, p.187.

[21] Monro, *Monro His Expedition* vol. 1, p.68.

[22] Turner, *Pallas Armata*, p.229. Turner is not the most reliable witness on affairs in Germany, and here he seems to be more concerned over the decline of armour and pikes, a concern he also expressed elsewhere. However, Turner does state clearly that it was the brigade system which was abandoned, and he was in the Swedish army in Germany at the time. Besides, Turner's statement is supported by subsequent army manuals, such as Troupitzen's *Kriegs Kunst*, which do not describe the brigade formation.

Cavalry Tactics

Gustavus Adolphus also reformed the cavalry. He decreased the depth of the formation to, at Lützen, three or four ranks.[23] Ultimately, three ranks seem to have become the standard depth, and it is perhaps telling that the King already in 1630 wanted at least the first three ranks to consist of armoured men.[24] Based on the army's experiences on the eastern front and in particular against the Commonwealth, he also added an additional emphasis on the shock role of cavalry, by encouraging it to charge home with the rapier. He had the cavalry dispense with the obsolete caracole tactics and instead ordered them to charge the enemy, firing only at almost point-blank range. Advancing by the trot, the men of the first line, and only the first, fired their pistols, after which the entire unit charged home. In the first official Swedish history of the war, Chemnitz described the tactical doctrine introduced for the cavalry by Gustavus Adolphus:

> Regarding the cavalry, his maxim was not to engage much with turning and the caracole. Instead the cavalry must deploy in three ranks and go straight at the enemy, to shock him. Only the first or, at most, the two first ranks must open fire, and this so close to the enemy that the whites of his eyes can be seen. After this, the cavalry will draw their sidearms, the last rank without firing any shot. Go against the enemy with rapier only, and keep both pistols (in the first rank, the remaining one) in reserve for the melee.[25]

Although such cavalry tactics were practised by others as well, this fit in well with the Swedish model's emphasis on the offensive. Incidentally, the same tactics were re-introduced later.[26] Based on regulations then issued by veterans of the Thirty Years' War, a cavalryman was not allowed to discharge his pistol until he saw the whites of his enemy's eyes, and then he was to press home the attack 'with force'(*medh gewalt*), that is, charging home with rapier alone without wasting time discharging his second pistol, so as to penetrate into the enemy formation.[27]

Instead of relying on the overly defensive caracole, Gustavus Adolphus attempted to increase the cavalry's firepower by attaching platoons with musketeers to the cavalry units. This was a new solution to the problem of combining firepower, mobility, and defensive capability. Gustavus Adolphus aimed for tactics that consisted of the effective combination of firepower and shock by momentum. Incidentally, his experiment in interspersing musketeers with cavalry also was inspired by the eastern wars and was first put to the test there. In Germany, musketeer platoons regularly operated in conjunction with the cavalry. Monro explains how at the battle of Breitenfeld:

---

[23] *Swedish Intelligencer* vol. 3, p.132.

[24] Alm, *Blanka vapen*, p.246.

[25] Chemnitz, *Königlichen Schwedischen* vol. 1, p.475.

[26] Fredholm von Essen, *Charles XI's War*, pp.128–9.

[27] Alf Åberg (ed.), *Fältmarskalken Rutger von Aschebergs journal och korrespondens till år 1680* (Stockholm: Historiska Handlingar 34:1, 1951), pp.1–267, on pp.188–90 (Paragraph 4).

> the Horsemen on both wings charged furiously one another, our Horsemen with a resolution, abiding unloosing a Pistoll, till the enemy had discharged first, and then at a neere distance our Musketiers meeting them with a *Salve*; then our horsemen discharged their Pistolls, and then charged through them with swords; and at their returne the Musketiers were ready againe to give the second *Salve* of Musket amongst them; the enemy thus valiantly resisted by our Horsemen, and cruelly plagued by our Plottons of Musketiers; you may imagine, how soone he would be discouraged after charging twice in this manner, and repulsed.[28]

In other words (and more modern English), the Swedish cavalry was ordered to fire their pistols only after the enemy had already done so and after the attached platoons of Swedish musketeers had fired a volley (salvo) at close range. Only then did the Swedish cavalry discharge their pistols, after which they charged home with rapiers. Having carried out the charge, the Swedish cavalry returned to their own line to regroup, while the Swedish musketeers, having by then had time to reload their weapons, discharged a second volley at the enemy.

In order to keep pace with the infantry musketeers, the cavalry in the time of Gustavus Adolphus advanced only at a slow pace. The cavalry would only increase speed at a distance of 60 paces to the enemy, when it would move into a trot or gallop.[29] However, there may also have been another reason for the relatively slow speed of the cavalry. Experienced officers knew that a cavalry charge at the gallop gave more opportunity for holding back to those who were unwilling to move into combat, since they then merely would slow down and let others get in front. However, by advancing slowly, any new recruits and men of questionable reliability who might be tempted to hold back would have less opportunity to do so without exposing themselves as cowards.[30] And thereby also exposing themselves to the death penalty for desertion under Gustavus Adolphus's Articles of War (Articles 58, 64).

The Swedish cavalry tactics were more offensive than those employed by most German cavalry. Yet, the description shows that they neither were expected to break through the enemy line on their own, nor did so. In fact, the rationale was the same as in infantry tactics: a combination of firepower and shock. The musketeers would fire a volley that disordered the enemy, the cavalry would then charge to cause further damage. If needed, the cavalry would withdraw at the time when the musketeers were ready to fire their second volley.

---

[28] Monro, *Monro His Expedition* vol. 2, p.65.

[29] Heribert Seitz, 'Den karolinska värjans taktiska betydelse för kavalleriet', *Ny Militär Tidskrift* 8, 1944, pp.1–12, on p.2.

[30] Noted by Gaspard de Saulx (1509–1573), Marshal of France. Gaspard de Saulx de Tavannes, *Mémoires de très-noble et très-illustre Gaspard de Saulx, Seigneur de Tavannes* (Paris: Foucault, 1822), pp.350–1. The memoirs were compiled and published around 1620 by the Marshal's son Jean from his father's notes. Tavannes also recommended not taking up the trot before a distance of 20 paces from the enemy, or yet better, 10 paces.

The serious flaw in the joint cavalry-musketeer formation was that the infantry musketeers could not move as fast as the cavalry. Gustavus Adolphus did not solve the question of how to combine shock and firepower in a cavalry context. He provided a better solution than what was generally available, but he did not reach what he probably had hoped to achieve. As a result, after the death of Gustavus Adolphus, Duke Bernard of Saxe-Weimar changed the tactical doctrine introduced by the Swedish king. He retained many aspects of the Swedish model but ordered his cavalry to charge at the gallop, independent of infantry support.[31]

Artillery Tactics

Gustavus Adolphus was personally skilled as an artilleryman and he made sure that his artillery was able to carry out combined operations with the rest of the army. The position of Swedish artilleryman had previously been a semi-civilian occupation, a craftsman rather than soldier. In 1621, Gustavus Adolphus established the first artillery unit. In 1629, he appointed Colonel Lennart Torstensson the commander of all Swedish artillery including the field artillery.[32] He also worked to standardise calibres and types of ordinance. Most striking of his reforms was, as noted, the introduction of a true field artillery as well as the light regimental artillery that henceforth was attached to every infantry regiment. Previously, artillery had fundamentally been stationary on the field of battle. At Lützen, the Swedish field artillery moved more than once, and mobility became its trademark. The regimental artillery was typically deployed between the infantry brigades.[33]

Field artillery was also deployed with the commanded musketeers who were detached to support the cavalry. At the battle of Lützen, the set-up was described as follows:

> Each of the *Wings*, were composed of sixe severall Regiments or Squadrons of Horse; lined with five several *Bodies*, of *Commanded Muskettiers*: every one of which *Bodies*, had two small *Drakes* or *Feilding Peeces*, which advanced playing still before them.[34]

---

[31] Ebbe Gyllenstierna, 'Karl Gustav Wrangel och Henri Turenne: Svensk och fransk krigföring under trettioåriga krigets sista skede', *Meddelande* 36 (Stockholm: Armémuseum, 1976), pp.39–51, on p.47.

[32] Based on a misreading of the Swedish word *regemente*, some have argued that Torstensson was appointed the head of Sweden's first regiment; however, an artillery regiment as such did not yet exist, although one was formed a few years later. The word *regemente* in this context meant 'command' (as a noun).

[33] Hedberg, *Kungl. Artilleriet*, p.305.

[34] *Swedish Intelligencer* vol. 3, p.128.

'Drake' was the English name for the regimental cannon used in conjunction with the commanded musketeers.

Gustavus Adolphus's Thoughts on Tactics, Strategy, and Grand Strategy

We have already seen how Gustavus Adolphus's tactical thinking changed over the years and adapted to new situations. During the early 1620s, he focused on defensive tactics, since his cavalry was too weak to make a decisive impact, in particular against Commonwealth forces. He essentially followed the Dutch model, although he also introduced two innovations: the deployment of infantry musketeer formations with his cavalry squadrons and the first regimental artillery. After the victories at Wallhof and Mewe in 1626, which proved that Swedish infantry had achieved the capability to stand against the Polish hussars, Gustavus Adolphus became more confident in the ability of his men and, although still primarily defensive, became yet more innovative in his tactics. Following the victory at Dirschau in 1627, which displayed the capability of the Swedish cavalry and, in addition, saw the first field test of Gustavus Adolphus's infantry brigade organisation, the King began to abandon defensive formations. By 1630, he had achieved an impressive tactical flexibility and trained officers who could make full use of it. At Breitenfeld, Gustav Horn on his own initiative succeeded in forming a new line to protect the flank, which had become exposed due the Saxon flight, and then called in the reserves with which he immediately charged and defeated an experienced enemy significantly stronger in numbers. On the other wing, the Swedish cavalry defeated that of Pappenheim, whose aggressive cavalry employed tactics that were no less efficient than those of the best Polish cavalry.

Gustavus Adolphus's strategic thought changed, too. The conquest of Riga in 1621 to a large extent relied on strategic surprise. It certainly helped that the Commonwealth was unprepared for a large-scale invasion of Livonia. In 1623, Axel Oxenstierna prepared an unofficial memorandum, presumably for his personal use, on how to wage war against the Commonwealth. The document summarised Sweden's strategy and described what Gustavus Adolphus and Oxenstierna set out to do. Oxenstierna first listed the, in his view, only two advantages of defensive wars: it was cheaper and it did not empty the country of able men. However, Oxenstierna continued, defensive wars over time reduced the state's ability to defend itself by impoverishing the country without offering any new resources in return. Moreover, it made the enemy more confident, reduced the reputation of the state, and relocated both the fighting and the burdens associated therewith to one's own territory. It was more difficult to conclude a successful peace and the conditions thereof would become worse. On the other hand, offensive wars brought many benefits. In Oxenstierna's words: offensive war was 'a powerful and singular means to force the enemy to [concede to us] good conditions and end the war'. Other advantages included greater state renown and greater state influence both on land and at sea, the fighting took place on enemy territory which weakened the adversary, and one's own population could live in security and suffered no burdens beyond taxation. Finally, offensive war added resources instead of consumed them, since the defeated enemy would have to pay war reparations and any loans. The main disadvantages, Oxenstierna noted, were the need for war funding, a large cavalry, and the risk for deteriorated relations with friendly states.[35]

We have seen that offensive war henceforth became the cornerstone of Swedish strategy. Gustavus Adolphus was the first in a long line of Swedish commanders who consistently chose an offensive strategy. Yet, until 1630 Gustavus Adolphus's strategy mostly was cautious. He frequently focused on sieges and, in part because of Sweden's limited resources, was cautious in his forward planning. As late as during the days prior to the battle of Breitenfeld, Gustavus Adolphus was careful not to overextend himself. He then wrote to Oxenstierna that he still considered 'how to attack the enemy, whether through diversions to reduce his forces one by one or through the delivery of a general battle'.[36]

After Breitenfeld, Gustavus Adolphus grew bolder, often seeking battle when he considered himself at an advantage. He began to calculate with the destruction of the enemy army as a real objective, not only the defeat of the opponent through attrition or a war of manoeuvre. Yet, he did not rush to battle when there was no dire need. At Lützen, he confronted Wallenstein because the Imperials aimed to cut his communication lines, not because he thought that he could end the war with one blow. The offensive strategy was not the result of foolhardiness or a blind belief in the invincibility of the Swedish army. Nor did Gustavus Adolphus's successors entertain such ideas. The continued focus on offensive operations was the result of Sweden's persistent lack of resources, which strongly encouraged rapid, decisive action over prolonged campaigns, for which there usually was neither men, supplies, nor money.

The strategic thought of Gustavus Adolphus has been discussed for centuries. Less well known is his grand strategy. During the wars with the Commonwealth, he attempted to weave a web of strategic alliances in which to trap Sigismund. In 1628–1629, he negotiated for an alliance against the Commonwealth with Gabriel Bethlen (Hungarian: Bethlen Gábor; 1580–1629), Prince of Transylvania. Gustavus Adolphus and Bethlen were brothers-in-law, being both married to daughters – Maria Eleonora and Catherine – of the Elector of Brandenburg. Besides, Bethlen, too, had a less than amicable history of relations with the Empire, so there was common ground for an alliance. In 1629–1632, Gustavus Adolphus negotiated with Janibeg Ghirai, Khan of the Crimean Khanate, and in 1630 with Murad IV, the Ottoman Sultan, about an alliance against primarily the Commonwealth but also the Empire. In 1630–1631, Gustavus Adolphus made attempts to stir up the Zaporozhian cossacks against the Commonwealth. Neither scheme resulted in significant support. Bethlen died before any result could be achieved, and the Ottoman Empire was already at war with Persia. However, Gustavus Adolphus's primary scheme in 1628 was an alliance with Muscovy, and in this he was successful. Muscovy had much to gain from such an alliance, since the Commonwealth was the adversary of both. The aforementioned Muscovite grain subsidies, which commenced in this year, became the first result of the negotiations. In March 1629, Tsar Michael Romanov agreed to go to war against the Commonwealth in the near future. He repeated this promise in 1630, and again in January 1631.[37] It has been observed that one reason for Gustavus Adolphus's apparent unwillingness, from his arrival in Pomerania until June 1631, to go on the offensive was that he waited for the planned alliance with Muscovy to bear fruit. He finally received news of Michael's decision to enter into a Swedish-Muscovite alliance in late March 1631. The final confirmation arrived in late June. Having received the long-awaited news, Gustavus Adolphus finally went on the offensive.[38]

---

[35] 'Om det osäkra förhållandet till både Pohlen och Danmark...', *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:1 (Stockholm: P.A. Norstedt & Söner, 1888), pp.514–18, on pp.515–17.

[36] *Sveriges krig* vol. 4, p.449, citing a letter from Gustavus Adolphus. The General Staff authors found the letter peculiar, since they were predisposed to believe that the King followed a strategy of annihilation, not attrition, despite his own words to the contrary.

In return for the alliance with Muscovy, Gustavus Adolphus in 1629 sent a military mission to Moscow, headed by Colonel Alexander Leslie, which arrived in Moscow on 22 January 1630.[39] Leslie's mission consisted of the artillery expert Gillis or, as he was better known, Julius Coyet (d. 1634), two captains, three lieutenants, an ensign, a clerk, and six servants. Coyet's task was to improve the Muscovite field artillery (and in 1632, another Swedish artillery expert, Vinius, was sent to found the Muscovite arms factories of Tula and Kashira). Yet more Swedish officers arrived in 1630. Their task was to obtain information on Muscovy's army and war plans but also to assist the Tsar in modernising his army on the Swedish model. No time was wasted. In June–July 1630, recruitment was already under way for the first two Muscovite 'new formation regiments' which Leslie and his men trained in the West European or, to be more specific, Swedish model of warfare.[40] In 1631, Gustavus Adolphus also promised to recruit an army of 5,000 men on behalf of the Tsar, which would attack the Commonwealth from the west at the same time that Muscovy attacked from the east.[41]

However, the proposed alliance with Muscovy was one of few matters on which the King and his chancellor did not agree. Oxenstierna simply did not trust the Muscovites. In 1615, he had written to De la Gardie that 'there can be no doubt that, in the Russians, we have neighbours who are disloyal but also mighty, whom it is impossible to trust owing to their innate perfidy and falsity sucked in with their mothers' milk, but who, because of their strength, are feared not only by us but also by many others among their neighbours, as we well remember'.[42] Oxenstierna could never make himself trust Muscovy. Besides, he saw dangers in breaking the Swedish truce with the Commonwealth. Sigismund remained a latent threat, but at the time, he lacked room for manoeuvre. Oxenstierna likely argued that the mere threat of a joint Swedish–Muscovite war against the Commonwealth would prevent Sigismund from sending reinforcements to his Habsburg relative – but only for as long as the threat remained latent. If war actually broke out, then anything might happen and the outcome was highly uncertain.[43] Gustavus Adolphus, on the other hand, did not share his chancellor's views of the Muscovites. Besides, he saw other advantages in the alliance. Nonetheless, Oxenstierna not only disagreed with his king on the matter, he seems also to have deliberately delayed communications between the Tsar and Gustavus Adolphus, in a process abetted by Skytte, who governed Livonia, Ingria, and Karelia, through which any communications between Moscow and Stockholm passed.[44]

---

[37] Porshnev, *Muscovy and Sweden*, pp.70–76, 85, 131.

[38] *Ibid.*, pp.97–104, 106–7.

[39] *Ibid.*, p.72.This was not the same Leslie who by then held command in Stralsund. Paul Dukes, 'The Leslie Family in the Swedish Period (1630–5) of the Thirty Years' War', *European Studies Review* 12 (1982), pp.401–24; Paul Dukes, 'The First Scottish Soldiers in Russia', Grant G. Simpson (ed.), *The Scottish Soldier Abroad, 1247–1967* (Edinburgh: John Donald, 1992), pp.47–54, on p.50.

[40] Porshnev, *Muscovy and Sweden*, pp.72, 75, 76. On the 'new formation regiments' and the modern arms factories, see Fredholm von Essen, *Muscovy's Soldiers*, pp.82–5, 84, 88–94. Julius Coyet died in Moscow, but both his sons remained in Sweden and were eventually ennobled. One of them, Frederik Coyet (1620–1689), later went into Dutch service and in time became governor of Formosa, which he then had to defend from a Chinese invasion fleet. Michael Fredholm von Essen, 'How Not to Survive Under Siege: The Fall of Fort Zeelandia, Dutch Formosa, 1661–1662', *Arquebusier* 31:6 (2010), pp.2–20, 29.

[41] Porshnev, *Muscovy and Sweden*, pp.82–3, 162.

As a result of these delays, but also because of domestic Muscovite developments, Gustavus Adolphus did not live to see the outcome of the Swedish–Muscovite alliance which he had concluded. Moscow first promised to move against the Commonwealth in the spring of 1631, then in the summer of the same year, and finally in the spring of 1632. However, it took until August 1632 before Muscovy dispatched Mikhail Shein to retake Smolensk from the Commonwealth with a newly-trained army which combined old-style cavalry and *streltsy* infantry with the new formation regiments that had been trained by Leslie and other Swedish officers. Leslie himself commanded the advance guard. The Smolensk War of 1632–1634 had begun.[45]

What is commonly referred to as the Swedish model of warfare is the organisation and tactical doctrine used at Breitenfeld and Lützen. However, Gustavus Adolphus's thinking was not static. If he had lived, he would no doubt have made further changes to Swedish doctrine, and to Swedish strategy, thus improving the Swedish model further. In short, the Swedish model was not fixed but evolved and adapted according to circumstances. The brigade deployment used at Breitenfeld and Lützen was not the final form of the Swedish model, nor did it form the zenith of Swedish tactical development. The infantry brigade was a solution to a particular tactical problem, and it depended on having troops well trained in its use. When the opposing forces changed their tactical doctrine, the complex brigade structure was no longer needed, so was modified into something simpler that also could be used by less well-trained soldiers. The same applied to strategy. Gustavus Adolphus's strategic thought changed over the years and adapted to new situations.

---

[42] Translation from Porshnev, *Muscovy and Sweden*, pp.108.

[43] Porshnev, *Muscovy and Sweden*, p.122.

[44] *Ibid.*, p.145.

[45] *Ibid.*, pp.114, 150; Fredholm von Essen, *Muscovy's Soldiers*, p.82.

7

Intelligence

Foreign Intelligence

Sweden already had a long tradition of employing intelligence in support of military operations.[1] Previously, the King had controlled his own agents abroad. A preserved document from 1566–1567, the time of Gustavus Adolphus's uncle, King Erik XIV, lists the names of agents, in neighbouring countries and as far away as at the courts of France, England, Spain, and several German states including at the Imperial capital of Vienna. By then, the King also ran agents in the united Kingdom of Poland and Grand Duchy of Lithuania, Muscovy, and in what had been the Kazan' Khanate on the Volga, a successor state of the Mongol Golden Horde located near the confluence of the Volga and Kama rivers in present central Russia, west of the Urals, which was conquered by Muscovy in 1552.[2]

Under King John III, the foreign intelligence system developed further, in particular with regard to Muscovy with which John frequently was at war. Foreign intelligence also relocated to the border commands. Due to the distances involved and the often urgent need in wartime for military intelligence, it was no longer possible for the King personally to handle all intelligence matters.

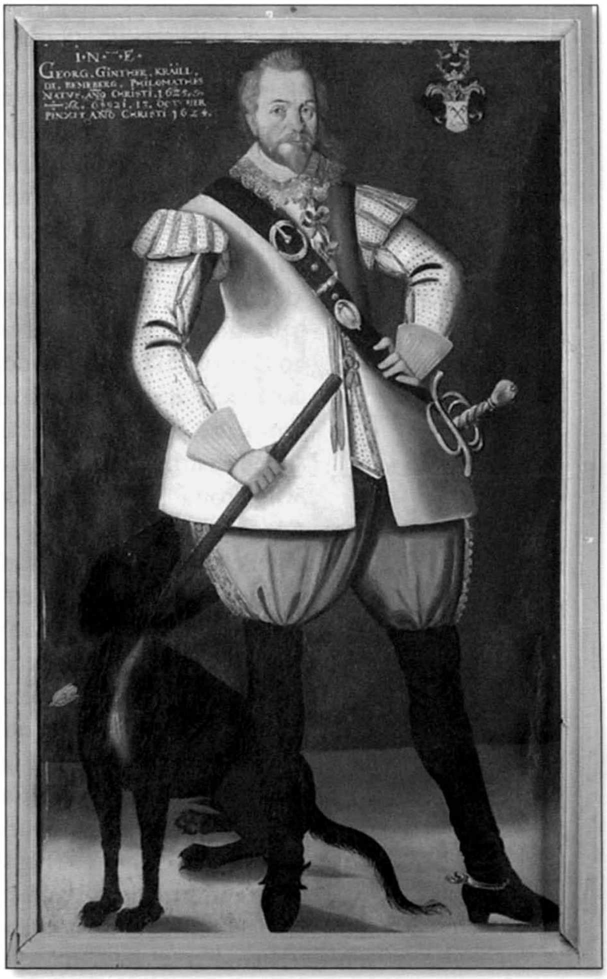
Intelligence always depended on people with good knowledge of the appropriate foreign languages. For operations in Muscovy, it was necessary to have men who knew Russian. Having identified a number of reliable Russian-speakers in eastern Finland, the Crown employed them, listed them as government interpreters, and paid them a salary, after which they served both in their formal capacity and as couriers and intelligence agents. One such interpreter was Anders Pettersson (Finnish: Antti Pekanpoika). He had been captured by the Muscovites in 1572 and sent to Kazan'. In 1585, he managed to return to Karelia. By then he had learnt both Russian and

---

[1] Michael Fredholm von Essen, 'Sweden's Intelligence Services: Guide to the Study of Intelligence', *The Intelligencer* 21:2 (AFIO, 2015), pp.55–61. Information on the intelligence activities under Gustavus Adolphus is best described in *Sveriges krig*, Suppl. Vol. 1, pp.311–69.

[2] Lennart W. Frick and Lars Rosander, *Det vakande ögat: Svensk underrättelsetjänst under 400 år* (Lund: Historiska Media, 1998), pp.23–27.

Tatar, so he joined the Swedish administration in Viborg, which handled most contacts with Muscovy. For intelligence contacts, the Viborg local government had instituted two separate functions. One was the 'Russian interpreters' (*ryssetolkar*) who handled diplomatic tasks, interpretation, and translation, while the other consisted of the 'peasant intelligencers' (*kunskapsbönder*, from the corresponding word *kunskapare*; German: *kundschafter*) who were individuals who were familiar with Muscovy and often went there, after which they reported any intelligence found back to Viborg. One of Anders Pettersson's sons, Erik Andersson (Finnish: Eerikki Antinpoika; *c.* 1586–1634), followed in his father's footsteps, becoming a Russian interpreter. Frequently travelling to Muscovy, he joined Jacob De la Gardie's military intervention army there in 1609. The intervention eventually resulted in the Swedish occupation of Novgorod, where Erik Andersson may have been the one who expropriated key census documents for later Swedish use. Erik Andersson was ennobled in 1626 for his years of valuable service, assuming the family name Trana. He then held several high positions, until he fell at the siege of Minden in Germany in 1634.[3]



Georg Günther Kräill, who on a clandestine mission to Riga in 1620 wrote a comprehensive report of its fortifications so as to prepare for the Swedish attack. Like many fortification officers, Kräill was an accomplished artist and later painted himself and the officers of the Kalmar Regiment. (Georg Günther Kräill, 1624)

Following the 1617 peace agreement in Stolbovo, which moved the Swedish border further into Muscovy, focus shifted to the Polish-Lithuanian Commonwealth. Already while the truce was in force, Sweden in a spectacular coup made a secret agreement with a Dutch fortification officer, Georg Günther Kräill (1584–1641), who then went to Riga to take up a position as head of fortifications. Kräill, who worked in Riga for two years, then prepared a comprehensive report for Gustavus Adolphus with details about all of Riga's fortifications, which was duly delivered in 1620 and was very useful when Gustavus Adolphus laid siege to Riga in the following year.[4] Kräill, who in 1621 was given a position as captain in the Household Regiment (he was ennobled in 1634 and continued to serve as a fortification officer until his death), was not the only Swedish spy in Riga. At roughly the same time, Jacob De la Gardie employed a Frenchman, Dr. Bosieu, as his agent in the town.[5]

---

[3] Kari Tarkiainen', Rysstolkarna som yrkeskår 1595–1661', *Historisk Tidskrift* 92 (1972), pp.490–522; Gullberg and Huhtamies, *På vakt i öster* vol. 3, pp.88–90.

[4] *Sveriges krig* vol. 2, p.61 n.2; Karol Łopatecki and Wojciech Walczak, *Mapy i plany Rzeczypospolitej XVII w. znajdujące się w archiwach w Sztokholmie / Maps and Plans of the Polish Commonwealth of the 17th C. in Archives in Stockholm* 1 (Warsaw: Ministers two Kultury i Dziedzictwa Narodowego, 2011), p.31.

The conquest of Riga gave Gustavus Adolphus the opportunity to recruit locals there with an even more thorough understanding of the Commonwealth. One of them was Georg von Schwengeln (*c.* 1590–1664), who served in intelligence and as a fortification officer throughout the war and beyond (he was ennobled in 1631 and appointed quartermaster-general in 1635).[6] Gustavus Adolphus accordingly kept himself informed about developments in the Commonwealth, and with good reason. As noted, in spring 1623, he received reports that Sigismund had brought a strong army to Danzig and that he would use a new fleet built there as a means to mount an invasion of Sweden. Yet more intelligence came in the form of reports from the energetic Anders Svensson (*c.* 1590–1630; he was ennobled as Ödell just before his death), an interpreter of Italian, French, and English who from 1621 served as Swedish agent in the Danish port of Helsingør. Svensson received news from captains of merchant ships on the way from the Polish ports in Prussia, but he could also report on Sigismund's attempts to enlist soldiers in Britain.[7] Similar reports arrived from an agent in northern Germany, Johan Salvius (in 1629 ennobled as Adler Salvius).[8] The intelligence was deemed sufficiently credible to order a partial mobilisation and prepare border defences. Eventually, it turned out that Sigismund did not have the resources to mount an invasion. Intelligence to this extent had reached Stockholm, too, in the form of reports from Jacob De la Gardie.[9]

Meanwhile, Axel Oxenstierna had streamlined the intelligence organisation and introduced a new system of acquiring foreign intelligence of a strategic nature. This was under the control of the royal chancellery, and it was, unsurprisingly, Gustavus Adolphus himself and Oxenstierna who were in overall charge of operations. Officers responsible for intelligence collection, referred to as 'residents', were positioned in major European cities. The residents were considered part of the diplomatic service and also fulfilled such functions. The residents were augmented by 'correspondents' elsewhere throughout Europe, who sent intelligence reports back to Sweden. Correspondents were recruited in Vienna and a very large number of towns in the German states but also in the Commonwealth (Danzig), Spanish Netherlands (Brussels), Dutch Republic (Amsterdam and The Hague), France (Paris and Lyon), Switzerland (Zurich and St Gallen), and Italy (Rome, Milan, and Venice). The correspondents were instructed to send written despatches every week. The correspondents were educated men, usually from the higher levels of society.

---

[5] *Kungl. Svea livgardes historia* 3:1, p.339.

[6] Łopatecki and Walczak, *Mapy i plany*, p.39.

[7] Norberg, *Polen*, pp.198–9. On Svensson and his reports, see Leo Tandrup (ed.), *Svensk agent ved Sundet: Toldkommissær og agent i Helsingør Anders Svenssons depecher til Gustav II Adolf og Axel Oxenstierna 1621–1626* (Aarhus: Universitetsforlaget i Aarhus, 1971).

[8] Norberg, *Polen*, pp.195, 199. On Salvius, see Heiko Droste, 'Johan Adler Salvius i Hamburg: Ett nätverksbygge i 1600-talets Hamburg' Kerstin Abukhanfusa (ed.), *Mare nostrum: Om Westfaliska freden och Östersjön som ett svenskt maktcentrum* (Stockholm: Riksarkivet, 1999), pp.243–55.

[9] Norberg, *Polen*, pp.199–200.

The residents recruited their own correspondents. The intelligence network seems to have become established during the 1620s, and it grew rapidly from 1630 onwards. In addition, agents with definite tasks were dispatched, either by the King or by Oxenstierna, when there was a requirement for intelligence that could not be fulfilled by correspondents or residents. Undercover agents were occasionally placed at enemy courts or within the entourage of enemy generals. Notably, Oxenstierna's men in 1620 recruited Pieter Isaacsz (1568–1625), Danish King Christian IV's court painter. Isaacsz reported to Stockholm until the end of his life and was never exposed.[10]

Tilly, Wallenstein, and Arnim were obvious targets for Swedish intelligence. The aforementioned Anders Svensson was in 1625 reassigned to Hamburg (where in 1630 he was promoted to resident). In 1628 Svensson found an insider who could report from the closed discussions between Tilly and Wallenstein in Güstrow, despite extensive security arrangements to protect the meeting. Incidentally, Swedish intelligence had an agent at Tilly's headquarters in 1631, too.[11] The Swedish resident in Berlin, Joachim Transehe (1589–1673; later ennobled as Transehe von Roseneck), was a Courlander who went into Swedish service after a number of positions elsewhere in Europe. When Arnim had joined the Imperial army, Transehe managed to recruit Arnim's chaplain, who henceforth provided intelligence on Arnim's activities. Transehe provided the chaplain with a cover name and a cypher to be used in correspondence. At the same time, Transehe, too, had an agent who could report on Tilly's army.[12]

Despite a focus on strategic intelligence, the residents and correspondents frequently produced intelligence of a tactical nature, including on the enlistment of new enemy units, deployments, and movements.

A particular function within intelligence can be said to have been the systematic production of propaganda. Regular newsletters were produced, and residents and sometimes correspondents were involved in their dissemination. The postmasters, too, played an important role, as they did in the transmission of intelligence to headquarters (more on which below).

Military Intelligence

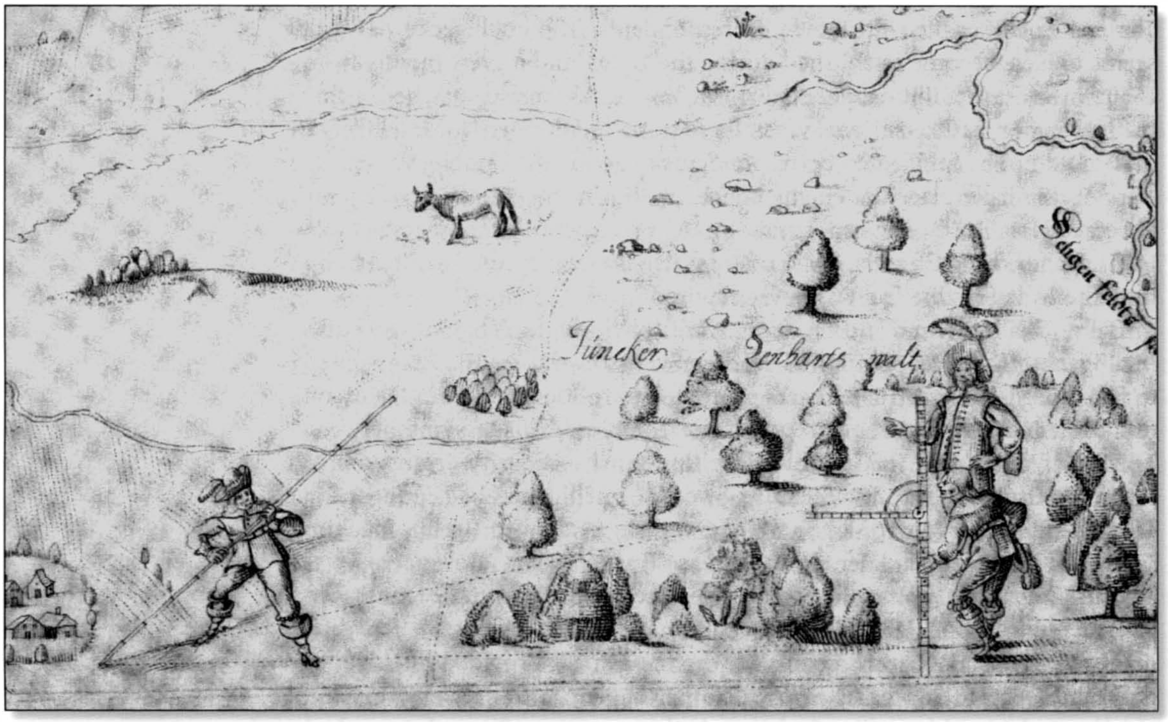
The military intelligence system, too, developed substantially during Gustavus Adolphus' reign. A military engineering corps was established in 1613. Its responsibilities included producing reliable maps in all theatres of operations. Henceforth, talented officers produced large numbers of maps, often under difficult circumstances such as on undercover missions or in territories with a hostile population. In 1628, if not before, Gustavus Adolphus instructed his mapmakers and commanders to obtain all available foreign maps and plans of border cities and fortifications, and this order was strictly adhered to by his fortification officers and quartermasters general. In1635, mapmaking became

---

[10] Tandrup, *Svensk agent ved Sundet*, pp.54–5.

[11] *Sveriges krig*, Suppl. Vol. 1, pp.318–19.

[12] *Ibid.*, p.316.



Surveyors and cartographers at work. (Self-portrait by Commonwealth cartographer Friedrich Getkant, 1634)

the responsibility of the Fortification Corps, which until 1641 remained part of the artillery.[13] For this reason, military intelligence officers were usually artillery and fortification specialists as well. Overall responsibility for tactical intelligence often lay with the senior quartermasters. Tactical intelligence focused on enemy forces, their organisation, deployment, and strength, supply conditions, and current intentions.

In the field army, however, Gustavus Adolphus personally took responsibility for intelligence, from at least 1630 assisted by his able major general, Dodo von Innhausen und zu Knyphausen.[14] Intelligence was also collected by the navy, the mobility of which came in handy when intelligence was needed from coastal areas.

It was common practice to send out agents disguised as civilians to gather tactical intelligence on the enemy army and its deployment. Sometimes extraordinary measures were taken to gain intelligence on the opposing forces. In early 1632, for instance, an army intelligence officer recruited a man who then was dispatched across the River Mosel to enlist in the Spanish army. Having accomplished this, the agent sent intelligence reports back to his Swedish handler.[15] Each Swedish general appears to have employed a number of such agents, although most were dispatched on more localised and less prolonged missions. The background of such men, unless they were rootless adventurers, was usually that of soldier or under-officer.

---

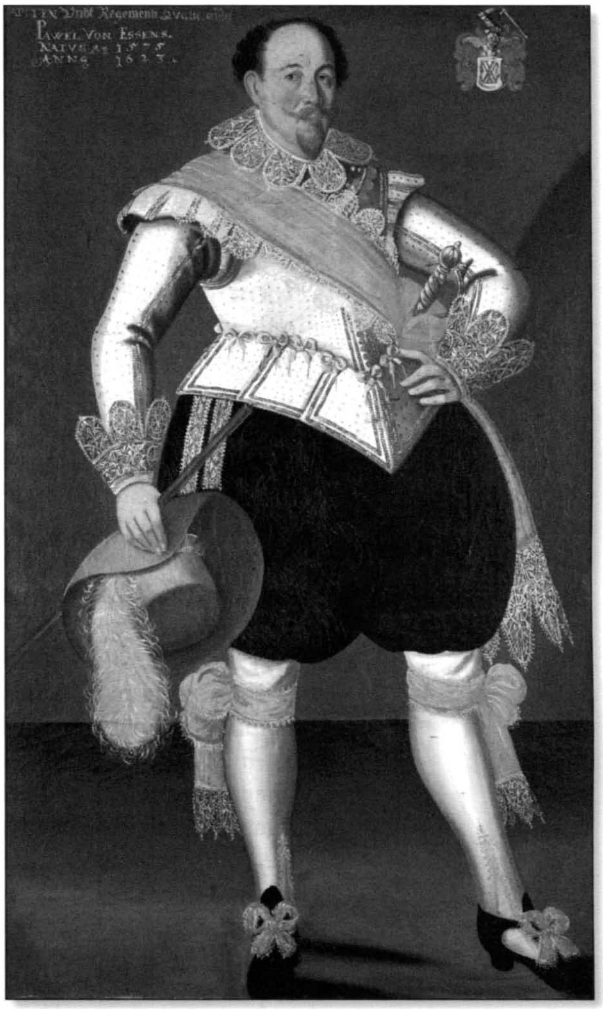
[13] Łopatecki and Walczak, *Mapy i plany*, p.49; Lars Ericson, 'Fortifikationens ritare', *Att illustrera stormakten: Den svenska Fortifikationens bilder 1654-1719* (Lund: Historiska Media, 2001), pp.23–27, on p.23; Björn Gäfvert, 'Kartor och krig: Svensk militär kartering under Trettioåriga kriget', *Krig och fred i källorna* (Riksarkivet: Årsbok för Riksarkivet och Landsarkiven, 1998), pp.88–100; Björn Gäfvert, 'Att känna territoriet: Svensk kartering under Trettioåriga krigets dagar', Kerstin Abukhanfusa (ed.), *Mare nostrum: Om Westfaliska freden och Östersjön som ett svenskt maktcentrum*(Stockholm: Riksarkivet, 1999), pp.74–92.

[14] *Sveriges krig*, Suppl. Vol. 1, pp.315, 333.

Most agents, however, were apparently locals, who were persuaded to spy on behalf of the Swedes. It is obvious from remaining reports that the quality of these agents varied widely. The opposing commanders for obvious reasons used similar means, and the Swedish army frequently uncovered enemy spies, who then were executed by hanging. Presumably Swedish military intelligence suffered similar losses among the more expendable agents.

Tactical intelligence collection was otherwise handled by select cavalry or dragoon patrols, and these played an important role during campaigns. Usually some 50 to 100 men or more were sent in each patrol. If horse was unavailable, infantry would be sent instead. A key task for these patrols was to snatch prisoners for interrogation, which explains why patrols were usually strong. The strength of enemy forces was sometimes estimated by the counting of standards. Another key task was to intercept enemy despatches.

Some prisoners of war were very amenable to interrogation. Many Protestants served in the Imperial and League armies, and the common practice of prisoners entering into the service of the victorious general no doubt persuaded many to speak freely about what they knew. It was also standard practice to interrogate travelling merchants and local inhabitants.



Regimental Quartermaster Captain Pawel von Essen, Kalmar Regiment, 1623. (Georg Günther Kräill)

At a greater distance than could be covered by cavalry patrols, generals employed correspondents who provided intelligence on more distant events. At least the known correspondents were active at a distance of around 100km ahead of the field army.[16]

The employment of assets used for military intelligence can accordingly be summarised as follows: At a distance of 100km or more, correspondents were used to learn about enemy troop movements. When there was reason to believe that an enemy army was approaching, agents were dispatched to locate it, each with orders to investigate a particular road or location. Then, based on the resulting information, yet more agents were dispatched, or, at shorter distances, cavalry patrols tasked to snatch prisoners for interrogation and intercept despatches. The last two types of intelligence were generally held to be most reliable. Enemy prisoners, even common soldiers, usually knew the identity and approximate strength of at least the units in their camp, since each unit had its assigned quarters and standards identified the location of the various companies and regiments.

---

[15] *Ibid.*, p.330.

[16] *Ibid.*, pp.333–2.

Counterintelligence

We have already seen that Sigismund and nobles in his entourage sent agents to Sweden to foment uprisings there. There was, accordingly, a need for a counterintelligence function. Unlike foreign and military intelligence, which already had a long history in Sweden, the Swedish Crown was always weak with regard to counterintelligence.[17] The very first security service was established only in 1560 by Jöran Persson, King Erik XIV's secretary and prosecutor. Jöran Persson's mission was to track down rivals among the nobility. In a ruthless and often deceitful manner, he produced a large number of death sentences, until eventually he himself was sentenced and executed by his own court. During the reign of Gustavus Adolphus, there was no similar function. Instead Axel Oxenstierna had to run counterintelligence, in the same way that he also managed so many other functions of the machinery of state.

In 1624, yet more suspected Commonwealth agents were arrested in Sweden. They were suspected of being Jesuits, or at least having been trained by Jesuits. Again the indefatigable Oxenstierna had to take matters into his own hands. He compiled a list of questions to be asked, under torture, to the suspects. His minions then took over, processing the suspects. Yet, Oxenstierna's list of questions is significant, because the final questions in the list reveals what Oxenstierna regarded as Sweden's then most important counter-intelligence requirements. Unsurprisingly, they were all associated with the threat from Sigismund, which at the time was the overriding concern:

- How does Sigismund plan to attack Sweden?
- How will Sigismund's party in Sweden act in such a situation, and which actions have they already taken?
- How have they propagated Catholicism?
- Which plots against the King's person are underway, and how have they planned to carry them out?[18]

Up to the moment when Gustavus Adolphus decided to invade Germany, the Commonwealth was his greatest strategic concern. Following the invasion of Pomerania, however, Gustavus Adolphus for a while introduced special border controls and a degree of censorship with regard to private mail. However, these measures were soon withdrawn.

---

[17] Fredholm von Essen, 'Sweden's Intelligence Services', pp.55–61.

[18] 'Förslag om rättegångssäkerhet…', *Rikskansleren Axel Oxenstiernas skrifter och brefvexling* 1:1 (Stockholm: P.A. Norstedt & Söner, 1888), pp.518–19.

Cryptology and Cryptanalysis

Cyphers of various kinds were used to maintain security of communications with residents, correspondents, and agents. Cover addresses were commonly employed so as to hide letters from enemy eyes, which was important, since the postal service passed through hostile as well as friendly territory.

Existing records suggest (but do not prove) that the Swedes also broke foreign cypher systems. Certainly a number of foreign cyphers are known from the cypher book of the Swedish chancellery. At the chancellery, the aforementioned Philipp Sadler von Salneck seems to have been the one primarily in charge of cyphers during the war in Germany and what today would be referred to as information security.[19]

A few Swedish officers employed improvised cyphers in their correspondence. An antiquarian and royal librarian called Johan Bure (Johannes Bureus; 1568–1652), who for a while served as the young Gustavus Adolphus's tutor and adviser, had introduced research into the old Scandinavian rune letters as an academic subject. Although people in a few rural areas still employed runes for specialised tasks, they were no longer in general use. Bure published books about rune writing, and during the war, some officers employed rune letters as a personal cypher. Likewise, officers from Finland occasionally wrote their confidential letters in Finnish. The rationale was the same; it was unlikely that anybody on the Continent would be able to read the letters, should they be intercepted.

Principles of Swedish Intelligence

Surviving documents show that sound principles of intelligence work were already understood at the time of Gustavus Adolphus, including those of planned and systematic intelligence collection and verification of sources and information. Requests for information were regularly sent out from headquarters to residents, correspondents, and others who might be able to provide the needed intelligence. The requests were sent well in advance so that there was time to collect intelligence and forward it to headquarters. As an example, in 1630 Stockholm dispatched requests for intelligence on enemy units in northern Germany about half a year before Gustavus Adolphus mustered his invasion army at Stockholm.[20] When Johan Adler Salvius in 1631 was appointed the new resident in Hamburg, Lars Grubbe (1601–1642), almost certainly echoing Gustavus Adolphus himself, was at first dissatisfied with his reports. Grubbe accordingly directed the new resident to report more frequently on specifically Danish activities. In addition, Grubbe emphasised, on behalf of the King, the need also to report the source of the information. 'Distinguish between such intelligence which seems reliable and such information the correctness of which cannot be verified', he instructed the newly appointed resident.[21] Most senior commanders were also careful to add their assessments of the veracity of sources and information. Knyphausen, Banér, and Horn invariably did so, and Kagg, who at first was less skilled in this regard, learnt over time, which confirms the emphasis of verification in the intelligence system.[22] In a similar manner, within the field army, cavalry patrols were regularly dispatched to verify the information provided by agents and other sources.[23]

---

[19] *Sveriges krig*, Suppl. Vol. 1, pp.316, 353–9.

[20] *Ibid.*, p.332.

[21] *Ibid.*, p.323.

Verification was particularly important in the field army, since certain Imperial commanders, notably the capable Pappenheim, habitually relied on deception to give the impression that he was stronger than he really was. Pappenheim employed a variety of methods, including the systematic dissemination of rumours; the dispatch of civilians and soldiers to the Swedish army who would claim to be defectors and, when interrogated, confirm the rumours; and the provision of false information to Swedish prisoners of war who then, through deliberately careless guards, would be allowed to escape. Pappenheim also employed field deception techniques to a considerable extent, including by having his cavalry change standards while on the move so that any observers would conclude that they had seen two different units, not the same one in two locations. Thus, it was hardly surprising that Pappenheim managed to operate so successfully on his own in northwestern Germany against superior numbers of enemy forces. Knyphausen, too, was known to employ similar methods.[24]

Cover names were regularly used so as to enhance security. In the final intelligence reports, the chancellery generally removed the names of sources and correspondents, or possibly the correspondents sent in their reports unsigned. Only the date and geographical origin of the report remain.[25]

The Postal Service

The intelligence system certainly employed special couriers on occasion, but for general operations, it depended on access to a reliable postal service. The Empire already had, since the fifteenth century, an efficient postal service, run by the Thurn und Taxis family. There were also private postal services, often under princely control. Most postal lines had only one service per week.

Sweden in 1618 established a postal link from Stockholm to Hamburg by way of Markaryd in southern Sweden and Helsingør in Denmark so as to provide a secure means of sending letters and other information. As noted, Swedish agents were located in both Helsingør and Hamburg. There was one service per week. A letter could be sent from Markaryd to Hamburg in five days. From Hamburg, it took five days to deliver mail to Cologne or Leipzig, six days to Frankfurt-am-Main, nine days to Prague, 10 days to Nuremberg, and 12 days to Vienna. In the winter of 1629–1630, the postal link was complemented by a maritime service from Helsingør to Stralsund. A maritime line was also established from Stockholm to Prussia. After the battle of Breitenfeld, an entire Swedish postal system was established in Germany so as to maintain reliable communications. Similar to the existing Thurn und Taxis system, the Swedish system accepted private mail.[26]

---

[22] *Ibid.*, pp.338–40.

[23] *Ibid.*, pp.337–8.

[24] *Ibid.*, pp.340–41.

[25] *Ibid.*, p.323.

Paradoxically, a Swedish postal system was established on the Continent before the same process took place in Sweden. As a result, mail transmission times remained slower in Sweden. By regular post, the news about Gustavus Adolphus's death in 1632 took about a month to reach Stockholm from Lützen.[27] Two-thirds of the transmission time was spent on Swedish soil. A real postal service was established in Sweden only in 1636. From this time, efficiency increased further. From 1646 onwards, mail between Sweden and the Continent was carried by hard-riding mounted postmen.[28]

---

[26] *Ibid.*, pp.344–7.

[27] Ahnlund, *Gustav Adolf*, p.245.

[28] Alf Åberg, *När Skåne blev svenskt: Två krig, två freder, snapphanar och försvenskning* (n.p.: SMB, 2013), p.155.

8

The Military Legacy of Gustavus Adolphus

Gustavus Adolphus became a legend in his lifetime, and soon biographers began to attribute all sorts of military innovations to him. Some of the technical and tactical innovations thus attributed (including the first introduction of the cavalry carbine and the paper cartridge, and the abolishment of the cavalry lance and musketeer's fork rest[1]) are myths. These developments certainly took place within his army, but not first and Gustavus Adolphus was not their father. However, others were real, including regimental artillery and a new model of warfare, to a higher degree than elsewhere based on a combined arms approach. Possibly of yet more enduring importance were Oxenstierna's administrative reforms. A conscription system was established which consistently managed to raise troops, despite the small population of Sweden and its territories. A logistics system was introduced which could supply the armies, despite the vast geographical depth of operations. The intelligence service was developed into a comprehensive support system to military operations. It is fair to say that the Swedish army that entered the Thirty Years' War and the organisation that enabled it formed the foundation for the subsequent Swedish rise to regional great power status.

What was unusual with the Swedish army under Gustavus Adolphus was a combination of factors. First, it was primarily a national army, but a professional one, not an amateur militia that could only be called up for a short period of time. Second, the strategic imperative of waging aggressive war beyond one's borders in order to feed on the enemy's resources enabled Sweden to sustain prolonged campaigns despite its general lack of resources and persistent state poverty. Third, the Swedish army was a thoroughly professionalised force, whose officers regarded military service as a career and aggressive war abroad as not only the best opportunity to economic and social advancement but, because of the lack of opportunities at home, often the only one.

---

[1] Walter Harte, *The History of Gustavus Adolphus, King of Sweden* vol. 2 (London: John Joseph Stockdale, 3rd edn 1807), p.20. First published 1759.

More than a century after the death of Gustavus Adolphus, the well-known strategist Frederick the Great, King of Prussia, at the end of his long military career summarised his conclusions on war in a military testament:

> I would first conquer enough land to enable me to procure provisions, to live at the expense of the enemy, and to select as the theatre of operations terrain that is most favourable for me; I would hasten to fortify my defensive line before the enemy could appear in the vicinity. I would have the terrain reconnoitred as far in all direction as patrols can be sent out; I would as quickly as possible have maps made of all the areas that would be suitable to serve our opponents as a camp, as well as all the routes that could lead into those areas. In this way I would obtain intelligence of the country, and my maps would clarify for me those positions that can be attacked and those that are unassailable, in which the Austrians might consider forming up. I would not be concerned with starting major battles, because one can conquer a position only with considerable losses and because in mountainous country pursuits cannot be decisive; but I would secure my camp strongly; I would fortify it with great care and would direct all my plans toward defeating thoroughly the enemy's detachments.[2]

This military testament corresponds closely to what Gustavus Adolphus set out to do in his military operations, and based on the Prussian King's other writings, it is obvious that Frederick admired his Swedish counterpart's military operations.[3] Gustavus Adolphus focused on supplying his armies at the expense of the enemy, setting up fortified camps and towns so as to secure his rear, the carrying out of reconnaissance and intelligence collection to avoid surprise, and a strategy of alternating between manoeuvre and battle.

It is a paradox that what became the most noted component of Gustavus Adolphus's tactical system, the infantry brigade, in reality was no more than one step on the way to the offensive model of warfare that henceforth would become the Swedish trademark. Moreover, the brigade organisation was soon dropped in favour of simpler types of deployment.

This does not mean that Gustavus Adolphus's organisational model and tactical doctrine failed to influence the western way of warfare. To the contrary. The Swedish model of warfare was copied by most west and north European militaries, including Sweden's opponents. Muscovy based its entire set of new formation regiments on the Swedish pattern. Moreover, the Swedish model laid the foundation for subsequent improvements in British infantry and French cavalry tactics. In addition, the Swedish regimental artillery was copied by many, including France, the Empire, and Muscovy.

---

[2] Frederick the Great's military testament (1768), in A. v. Taysen (ed.), *Das militärische Testament Friedrichs des Grossen* (Berlin: Ernst Siegfried Mittler und Sohn, 1879), pp.26–7; translation based on that of Walter J. Renfroe, Jr., in Delbrück, *Dawn of Modern Warfare*, p.313.

[3] Whether Frederick also learnt from them remains unclear. A study of Frederick's library suggests that he probably was more influenced by later examples. Adam Lindsay Storring, *Frederick the Great and the Meanings of War, 1730–1755* (Cambridge: St. John's College, dissertation, 2017), pp.182–3.

The Swedish model of warfare strongly influenced the development of British infantry tactics. Following the return of Scottish and English officers from Swedish service to participate in the English Civil Wars:

> [t]here was subsequently a very rapid, nationwide change, which appears to have started within weeks of Edgehill, to delivering the infantry's fire in very short, sharp bursts at very close range, followed by an immediate assault. This was found to be a very effective technique against both cavalry and infantry and became used almost to the exclusion of other, earlier ways of delivering fire and meant that infantry could defend themselves against cavalry without resorting to squares or other all round defensive formations.[4]

Did the skills that these officers gained in the Swedish army also provide the initial inspiration for the British introduction of platoon fire in a set pattern, as a method to avoid leaving the troops vulnerable while reloading? Certainly, a belief to this extent existed in Britain in the eighteenth century.[5] In the nineteenth century, there was a belief among Catholic military historians, possibly based on the sources cited above, that it was the Scots in Swedish service at the battle of Breitenfeld who delivered platoon fire for the first time.[6] Yet, there are no more than tantalising hints in the sources from the Thirty Years' War itself, and in a centuries-long debate, some have argued for,[7] others against.[8] However, it remains likely that platoon fire, too, was a Swedish introduction to the British Isles. In 1676, an anonymous regulation known as *An Abridgement of the English Military Discipline* was published in London. Based on the Swedish organisation (but with the reduced number of pikemen of the post-Gustavus Adolphus Swedish company structure), it described a system of firing that the regulation referred to as the 'Swedes way.' In this system, the musketeer corporalships (which, as noted, frequently were detached from the main formation in the Swedish army) would deploy in a line slightly ahead of the pike formation, alternating one forward and one to the rear. The corporalships of the forward line fired first, each in one salvo. As they then reloaded where they stood, the rear corporalships advanced to fire in their turn. As long as we define platoon fire as platoons firing in a set pattern, then this was certainly an early form or platoon fire.[9] Building on the Swedish experience, the British developed this tactical doctrine further, successfully establishing a tradition of efficient infantry tactics that in time would enable them to create an empire considerably larger than the small maritime empire that Gustavus Adolphus and his successors carved out in northern Europe.

---

[4] Blackmore, *'Destructive and Formidable'*, p.255. For further discussion, see Adam Marks, *England, the English and the Thirty Years' War (1618–1648)* (University of St. Andrews, dissertation, 2012); Steve Murdoch and Alexia Grosjean, *Alexander Leslie and the Scottish Generals of the Thirty Years' War, 1618–1648* (Abingdon: Routledge, 2016).

[5] Although the eighteenth-century historian Walter Harte eagerly attributed far too many innovations to Gustavus Adolphus, Harte's comments about the battle of Breitenfeld are of interest in this context: 'Here too for the first time, except in reviews, was practised in good earnest the method of firing in *platoons*.' Harte, *History of Gustavus Adolphus* vol. 2, p.25.

[6] Antoine de Villermont, *Tilly oder der dreissigjährige Krieg von 1618 bis 1632* (Schaffhausen: Hurter, 1860), p.573.

[7] Hamilton, *Afhandling*, pp.334–5.

[8] Blackmore, *'Destructive and Formidable'*, p.73.

[9] *An Abridgement of the English Military Discipline* (London, 1676), pp.31–2; cited in Blackmore, *'Destructive and Formidable'*, pp.78–9, Fig. 3.2.

As for cavalry tactics, Gustavus Adolphus initiated the change but did not complete it. We have seen how, in his time, Swedish cavalry advanced with infantry support. The cavalry would only increase speed at a distance of 60 paces to the enemy, when it would move into a trot or gallop and the entire cavalry unit charge home with the rapier, with only the first or, at most, the first two ranks discharging their pistols and then only when they saw the whites of the enemy's eyes.[10] Immediately after the death of Gustavus Adolphus, Bernard of Saxe-Weimar improved the existing tactical doctrine further. He retained the Swedish model, including its aggressive aspects, but ordered his cavalry to charge at the gallop, independent of infantry support. Bernard later went into French service, where he recommended the adapted tactical doctrine to the Viscount of Turenne, who then served under him. As a result, the French army took up the practice with often spectacular results. Turenne, who referred to this type of cavalry charge as in the Swedish manner (à la suèdoise) in his turn recommended the doctrine to his followers. In 1676, the doctrine was reintroduced into the Swedish army in which it had been forgotten (incidentally, the Swedes henceforth called it a charge in the French manner, à la française).[11] Not only Turenne but also his younger contemporary Louis de Bourbon, Prince of Condé (1621–1686) adopted the cavalry shock tactics advocated by Bernard. We have seen how Turenne also adopted the use and terminology of 'commanded musketeer' units.

Swedish cavalry tactics were adopted by Imperial supreme commander Albrecht von Wallenstein's army, too. The Swedish example made Wallenstein abolish the caracole. Although this was supposed to have come into effect already at Alte Feste, this cannot be concluded with certainty. However, there is no doubt that Wallenstein after the battle of Lützen forbid the use by his cavalry of carbines, since their employment during the caracole caused the men to turn their back to the enemy after shooting, which exposed them to a decisive counter-attack.[12]

As for the Swedish regimental artillery, we have already seen how Wallenstein copied both the Swedish field artillery doctrine and the Swedish system of regimental artillery. Muscovy, which already had a strong artillery tradition, benefited from the work of men such as Coyet who cast Swedish-style regimental cannons for the first new formation regiments. France introduced and retained Swedish-style regimental artillery, which was referred to as *pièces suédoises*, until 1756 or even, according to other sources, 1814.[13]

---

[10] Chemnitz, *Königlichen Schwedischen* vol. 1, p.475; Seitz, 'Den karolinska värjans taktiska betydelse', p.2.

[11] Gyllenstierna', Karl Gustav Wrangel och Henri Turenne', p.47.

[12] Letter to Field Marshal Johann von Aldringen, 2 January 1633 (No. 377), reprinted in Friedrich Förster (ed.), *Albrechts von Wallenstein, des Herzogs von Friedland und Mecklenburg, ungedruckte, eigenhändige vertrauliche Briefe und amtliche Schreiben aus den Jahren 1627 bis 1634*, Vol. 2 (Berlin: G. Reime, 1829), pp.308–10.

[13] Hamilton, *Afhandling*, p.250; Gyllenstierna',Karl Gustav Wrangel och Henri Turenne', p.49.

These comments should not be taken as crediting Gustavus Adolphus, or any one person or army, with all tactical innovation that took place during the war, or later. No army is an island of itself, and military history shows that war is one of those activities which not only encourages but positively compels imitation by the inferior of the superior combatant. A tactical doctrine consists of ideas and concepts as much as the weapons and other hardware involved in combat. Gustavus Adolphus's tactical ideas and concepts influenced later tacticians in the same way that he himself had learnt from those who went before him. Each refined these ideas and also added to them. We may never know exactly who or what inspired Gustavus Adolphus to introduce some of his innovations in tactics, but it would hardly be surprising if we one day learn that this or that tactics originated in the cardboard units that Gustavus Adolphus and two other men on 7 June 1620 moved across John of Nassau's table.

Appendix I

The Marching Order of the Swedish Army, September 1631

In early September 1631, a team of Saxon intelligence officers monitored the Swedish army as it marched across the bridge over the River Elbe at Wittenberg. Counting the men, horses, and units, they noted all relevant information in a report to John George, the Elector of Saxony. The original, preserved in the State Archive of Saxony, is possibly the only surviving contemporary description of an entire early modern army in marching order.[1]

The first Swedish troops, 500 horse, crossed at 4:00 p.m. on 10 September. On 12 September, quartermaster David Bouillon crossed with 300 horse and seven wagons. On 13 September, the entire field army followed. The units were described as follows:

2,046 foot
62 horse
2 wagons
4 cannons with 11 horses
2 cannons with 13 horses
2 cannons with 15 horses
1 cannon with 35 horses
1 cannon with 28 horses
1 cannon with 29 horses
1 cannon with 31 horses
2 artillery wagons (*Zeugwagen*) with 9 horses
2 armourer's wagons (*Rüstwagen*)
1 open wagon (*Karre*) with large cannon balls
8 cannons with 1 horse
1 cannon with 2 horses
276 horse, with 4 blue and white cornets
His Majesty the King of Sweden
130 horse, 1 cornet in black and gold

---

[1] Jakobsson, *Lantmilitär beväpning och beklädnad*, 264–6; Göransson, *Gustav II Adolf*, 228–9. Based on the report, Göransson, a talented artist, illustrated the entire 1631 Swedish field army in marching order. *Ibid.*, 230–61. See also *Sveriges krig* 4, 447; Hedberg, *Kungl. Artilleriet*, 151; Rumenius, *Wästgöta Ryttare*, 145–7.

66 horse, 1 cornet in black and gold
48 horses, the King's Life Cavalry including 36 spare (*einzelne*) horses
218 horse, 2 cornets in blue and red
84 horse, 1 white cornet
85 horse, 1 uranium yellow cornet
79 horse, 1 yellow cornet
67 horse, 1 red cornet
110 horse, 1 blue cornet
63 horse, 1 cornet in blue and red
126 horse, 2 parrot green cornets
178 horse, 2 blue cornets
4 royal coaches, each with 6 horses
2 royal armourer's wagons
392 horse, 8 green cornets
448 horse, 8 blue cornets
213 horse, 2 red cornets
6 wagons
24 spare horses
1,284 foot with 13 old white colours
3 wagons
10 spare horses
3 cannons, each with 2 horses
1 open wagon with cannon balls
327 foot with 4 colours
1 cannon with 7 horses
2 cannons with 1 horse
8 horse
16 wagons
3 cannons, each with 1 horse
2 open wagons with cannon balls
778 foot with 12 colours, blue and white with moon and stars, 4 of which so torn that they are almost destroyed
19 wagons
534 horse, 7 white cornets of Colonel Halle
3 cannons, each with 1 horse
1 wagon with gunpowder and musket balls
383 foot, 8 colours, 7 blue and 1 white
19 spare horses
6 cannons with 1 horse
2 wagons with gunpowder and musket balls
730 foot, 16 colours, including 4 red and 4 white, 7 red, and 1 white
8 spare horses
5 wagons
3 cannons, each with 2 horses
1 open wagon with cannon balls
808 foot, 12 colours, 4 blue, the others old and torn
5 wagons
43 spare horses

744 horse, 11 blue cornets
8 wagons, including 3 with 6 horses
27 Life Cavalry and other horse
435 horse, 6 green cornets
18 Life Cavalry, Gustav Horn
461 horse, 6 blue cornets
15 spare horses
1,130 foot, 8 colours
2 armourer's wagons
18 spare horses
2 cannons, each with 2 horses
1 cannon with 1 horse
1 open wagon with cannon balls
805 foot, 4 colours, very torn
3 cannons, each with 1 horse
1 open wagon with cannon balls
334 foot, 8 colours, 1 yellow, 3 completely white, 1 white with a black lion
416 foot, 9 colours, including 4 fairly old, torn blue, 5 blue with a white cross
6 spare horses
1 wagon
320 foot with 6 colours
3 cannons, each with 2 horses
1 open wagon with cannon balls, with 2 horses
343 foot, 6 colours
20 spare horses
12 wagons
3 cannons, each with 1 horse
1 open wagon with cannon balls, with 2 horses
257 foot, 4 white, old torn colours
10 spare horses
2 wagons
606 foot, 8 colours, 2 yellow and 6 white
31 horse without cornet
97 horse, old, white cornets
60 horse, black-gold cornets
63 horse, red cornet
56 horse, pale green cornet
56 horse, blue cornet with gold
34 horse, red cornet
1 wagon, 6 horses
156 horse, 2 blue cornets
111 horse, brown cornet
94 horse, blue cornets
84 horse, old, red cornet with a sun
247 horse, without cornets
708 horse, 10 blue cornets
5 wagons
16 spare horses

340 horse, 5 green cornets
2 wagons
22 Life Cavalry
570 horse, without cornets
2 wagons
149 horse, without cornets
406 horse, without cornets
1 petard in a wagon with 2 horses
1 open wagon with cannon balls
59 wagons
2 open wagons with cannon balls
80 horse, without cornets
737 foot with 6 colours, 1 white, 1 yellow, 4 uranium yellow with white crosses
1,837 assorted baggage, armourer's, ammunition, and sutler's wagons, and coaches (*Kutschewagen*)
1,403 horse without cornets, with and without wagons, various and continuous
1,000 musketeers, various, passed across
1,000 dragoons passed on Sunday, which have not been counted

In total:

Horse	15,711
Dragoons	1,000
Foot	12,804
Wagons	2,003
Artillery	54 (12 heavy, 42 light)
Open wagons with cannon balls	17
Total: Foot and horse	29,515

Not including a great number of free horses, including those mounted by women and youngsters, and many men who sat in wagons, so were not counted.

Comments

Those who compiled the report were good at taking notes but then somebody calculated the total numbers wrongly. Whoever calculated the total, mistakenly added the draught-horses to the cavalry, thus grossly misrepresenting the cavalry strength. A recount produces a total of 12,304 foot, 11,303 horse, and 54 cannons, in total 23,607 men, accompanied by 2,022 wagons and an estimated 5,000 draught-horses.[2]

---

[2] *Sveriges krig* 4, p.447.

There have been several attempts to identify the units in the column based on their cornets and colours. Historians have been tempted to see their own favourite regiments in the vicinity of the King. For instance, the report describes how the companies of horse immediately before and after the King carried blue-white and black-gold cornets, colours which have been associated with the Finnish and Västgöta Cavalry Regiments, respectively.[3] However tempting such a conclusion might be, other regiments, too, carried cornets in these colours, including several that Gustavus Adolphus, no doubt, regarded as equally reliable. Sadly, most of the units in the report cannot be identified with any degree of certainty.

---

[3] Rumenius, *Wästgöta Ryttare*, p.148.

Appendix II

Order of Battle, Lützen, 1632

(Based on Schürger, *Archaeology*, pp.61–2, 68–9. Note that strength is frequently very speculative.)

Imperial Order of Battle

	Commander
Cuirassier Regiments	
Desfours	Nicolas Desfours
Götz	Moritz von Falkenberg
Holck	Frantz von Uhlefeld
Lohe	von der Lohe
Trcka	Adam Erdmann von Trcka
Bredau	Hans Rudolf von Bredau
Harquebusier Regiments	
Drost	Wilhelm von Westfalen, Landdrost und Dringenberg
Goschütz	Benedikt Goschütz
Hagen	Johann Nicolaus Hagen von Sauwenbein
Leutersheim	Johann von Leutersheim
Loyers	Gottfried von Loyers
Piccolomini	Ottavio Piccolomini di Aragona
Tontinelli	Anton Tontinelli
Westfalen	Heinrich Leo von Westfalen
Westrumb	Johann von Westrumb
Dragoon Regiments	
Trcka	
Croat Regiments	
Isolani	Ludwig Johann Hector von Isolani
Beygott	Daniel Beygott
Corpes	Marcus Corpes

	Commander
Révay	Paul von Révay
Infantry Regiments	
Baden	Stopler
Friedrich Breuner	Philipp Friedrich von Breuner
Hans Philipp von Breuner	Hans Philipp von Breuner
Jung-Breuner	Hans Gottfried von Breuner
Colloredo	Rudolf von Colloredo-Waldsee
Comargo	Theodor Comargo
Grana	Francesco Grana di Caretto
Chiesa	Matias Lasky or Andreas Matthias Kehraus
Reinach	-
Alt-Sachsen	Bernhard Hämmerle
Waldstein	Berthold von Waldstein

Pappenheim's Cavalry (arrived at noon)

Cuirassier Regiments	
Sparr	Albrecht von Hofkirchen
Harquebusier Regiments	
Bönninghausen	Lothar von Bönninghausen
Lamboy	Wilhelm von Lamboy
Dragoons/Guard Units	
Merode's 'Obwacht' Life Guard	-
Pappenheim's 'Rennfahne' Life Guard	-
Merode	Robert Borneval d'Arlin
Pappenheim	-
Croat Regiments	
Batthyanyi	Franz Batthyanyi
Forgacs	Nicolas Forgacs de Gymes
Orossy	Paulus Orossy
Cossacks	
Poles	-

Pappenheim's Infantry (arrived in the evening)

Infantry Regiments	
De Haes	Gil De Haes
Goltz	Martin Maximilian von der Goltz

	Commander
Moriamez-Pallant	Karl Dietrich Pallant de Moriamez
Pallant	Rudolf von Pallant
Reinach	Gabriel von Comargo
Würzburg	Willich

Swedish Order of Battle

	Commander
Cavalry Regiments	
Småland	Fredrik Stenbock
Östgöta	Lennart Nilsson Bååt
Uppland	Isaak Axelsson
Södermanland	Otto Sack
Västgöta	Knut Soop
Finland	Torsten Stålhandske
Georg von Uslar	Georg von Uslar
Rostein	Friedrich Rostein
Kurt von Dalwigk	Kurt von Dalwigk
Franz von Dalwigk	Franz von Dalwigk
Thilo Albrecht von Uslar	Birckenfeld
Beckermann	Eberhard Beckermann
Bulach	Klaus Konrad Zorn von Bulach
Goldstein	Marx Conrad von Rehlinger
William of Saxe-Weimar	William of Saxe-Weimar
Bernard's Life Regiment	David Bouillon
Carberg	Carl Joachim Carberg
Courland	Hans Wrangel
Livonia	Karl von Tiesenhausen
Courville	Nicholas de Courville
Hofkirchen	Henning von Geisto
Ernst von Anhalt	Ernst von Anhalt-Bernburg
Löwenstein	Georg Ludwig von Löwenstein
Brandenstein	Brandenstein
Steinbach	Jaroslav Wolf von Steinbach
Stechnitz	Georg Matthias von Stechnitz
Öhm	Johann Bernhard von Öhm
Infantry Regiments	
Swedish Brigade:	*Gabriel Kyle*
Östergötland	Gabriel Kyle
Hård	
Hastfehr	
Yellow Brigade:	*Nils Brahe*
Life Guard	Erik Stenbock

	Commander
Yellow Regiment	Nils Brahe
Blue Brigade:	*Hans Georg aus dem Winckel*
Blue Regiment	Hans Georg aus dem Winckel
Green Brigade:	*Georg Wulf von Wildenstein*
Bernard's Green Life Regiment	Johann Winckler
Black Regiment	Georg Wulf von Wildenstein
Leslie	Ludovick Leslie
Duke Wilhelm's Brigade:	*Carl Bose*
Wilhelm's Life Regiment	Georg Philip von Zehm
Bose	Carl Bose
Pforte	Hans von der Pforte
White Brigade:	*Dodo von Innhausen und zu Knyphausen*
White Regiment	Dodo von Innhausen und zu Knyphausen
Thurn's Brigade:	*Hans Jacob von Thurn*
Black Regiment	Hans Jacob von Thurn
Isenburg	Wolfgang Heinrich von Isenburg-Büdingen
Hesse-Kassel's Green Life Regiment	Hans Heinrich von Güntherode
Mitzlaff's Brigade:	*Joachim Mitzlaff*
Mitzlaff	Joachim Mitzlaff
Rossow	Friedrich von Rossow
Gersdorf	-
Other Regiments:	
Brandenstein	Brandenstein
Löwenstein	Georg Ludwig von Löwenstein
Henderson	John Henderson

Appendix III

Selected Enlisted Regiments of Gustavus Adolphus

Infantry Regiments	Year	Raised in	Destiny
Nils Stiernskiöld's Regiment	1617	Dutch Republic	Garrison unit, 1619
Philipp von Mansfeld's Regt.	1618	Germany	Garrison unit in Riga, 1622
Jacob Seaton's Regt.	1621	Scotland	Garrison unit in Riga, 1622
Georg von Arnim's Regt.	1624	Germany	Blue Regt.
Franz Bernhard von Thurn's Regt.	1624	Germany	Red Regt.
Jacob Spens' Regt.	1624	Scotland	In service
Hans Caspar von Klitzing's Regt.	1627	Brandenburg	Green Regt.
Jacob Ramsay's Regt.	1627	Scotland	In service
Dietrich von Falkenberg's Regt.	1629	Germany	Black Regt.
Knyphausen's Regt.	1629	Germany	Combined with remnants of other regts
Wilhelm Caspar von Metzfall's Regt.	1629	Denmark	Combined with remnants of the above
Donald Mackay's Regt.	1629	Scotland	In service
Alexander Leslie's Regt.	1629	Stralsund	In service
Jacob Duwall's Regt.	1629	Germany	In service
Nicolaus Chemnitz's Regt.	1629	Stralsund	In service
Jacob Seaton, Jr.'s Regt.	1629	Britain	In service
Patrick Ruthven's Regt.	1629	Britain	Garrison Regt. in Prussia

Infantry Regiments	**Year**	**Raised in**	**Destiny**
Robert Leslie's Regiment	1629	Scotland	In service
Friedrich Ulrich von Rosen's Regt.	1630	Commonwealth	In service
Johann Vitzthum von Eckstädt's Regt.	1630	Brandenburg	Orange Regt.
Magnus Ernst Dönhoff's Regt.	1630	Prussia	In service
Hans Christofer von Burgsdorf's Regt.	1630	Prussia	In service
Siegfried von Damitz's Regt.	1630	Pomerania	White Regt.
Åke Tott's Regt.	1631	Pomerania	Disbanded, 1632
William Baillie's Regt.	1632	Prussia	In service
Cavalry Regiments	**Year**	**Raised in**	**Destiny**
Rhinegrave Otto Louis's Cavalry Regt.	1628	Germany	In service
Wolf Heinrich von Baudissin's Cavalry Regt.	1628	Germany	In service
Siegfried von Damitz's Cavalry Regt.	1630	Germany	Disbanded after Breitenfeld
Nicolaus Dietrich Sperreuter's Cavalry Regt.	1630	Pomerania	In service
Johann Philip von Ortenburg's Cavalry Regt.	1630	Prussia/Stralsund/ Sweden	Life Regiment of Horse
Gustav Horn's Cavalry Regt.	1631	Damitz's Cavalry	In service
Bernard of Saxe-Weimar's Cavalry Regt.	1631	Germany	In service
Dragoon Regiments	**Year**	**Raised in**	**Destiny**
Guillaume de la Barre's Regt.	1621	Germany	Probably disbanded, 1625
Georg Christoph von Taupadel's Regt.	1630	Courland/Prussia	In service
Lars Kagg's Regt.	1630	Pomerania	Severe losses at Albaxen and Stahle but in service
Daniel de Bataille du Meny's Regt.	1631	Prussia/Pomerania?	In service
Wolf Heinrich von Baudissin's Regt.	1631	Prussia/Pomerania	In service

Colour Plate Commentaries

Front cover:
Captain, Norrland territorial regiment, 1626

The Norrland territorial regiment in 1626 produced three field regiments of foot, one of which was headed by Colonel Jacob Duwall, an experienced Scotsman who had been in Swedish service since 1607. His field regiment primarily consisted of men from the northern province of Hälsingland. A 1626 painting by Nicolas de la Fage, currently in Karlberg Castle, depicts Colonel Duwall and the entire Norrland territorial regiment. The painting shows that the men of each company wore the same uniform, but there was no unified regimental uniform. Furthermore, the company officers wore uniforms of the same colour as their men. Both officers and men were issued with cloth at the same time, although officers received more and better-quality cloth than their men and could afford the services of a proper tailor. As a result, in many units the soldiers wore jackets and breeches in the same colour. This captain, too, wears jacket and breeches made out of the same red cloth. The Norrland regiment was based in northern Sweden, and although well dressed and equipped, it is possible that its officers were not quite up to date with contemporary fashion. For instance, the 1626 painting suggests that some of its officers wore doublets with an exaggeratedly padded stomach of the type that is generally referred to as a peascod belly or goose belly, which already a few years earlier had gone out of fashion elsewhere. Such a style would fit well with this captain's Spanish collar and cuffs. Swedish hats were particularly wide-brimmed and low, in the style that in Germany became known as 'Swedish hat' (*Schwedenhut*), and the hat of this captain is no exception. Unlike his men, he also wears a white plume in his hat. His sash is orange, which according to the painting was a common sash colour among the captains of his battalion. Like many officers, he is armed with a partisan. At this time, many weapons, and most high-quality ones, were still imported from the Continent, often the Dutch Republic, so it can be assumed that his partisan is imported. As a sidearm, the captain carries a typical 'Swedish-style' rapier. Following contemporary fashion, he has shaved his face except for a moustache and goatee. However, he does not wear his hair as short as Gustavus Adolphus.

Rear cover: Gustavus Adolphus at the siege of Riga, 1621

When Gustavus Adolphus invaded Livonia in 1621, he did so with the largest Swedish army ever brought overseas. A few years later, he would more typically appear in simpler dress, more suitable to conditions in the field, but at this time, most of the King's wardrobe was representative of the styles followed by monarchs elsewhere. In this reconstruction, he wears a heavily embroidered violet silk jacket and breeches which have been dated to around 1620. To this, Gustavus Adolphus has added the customary long linen stockings decorated with embroidery or lace at the top (of the type known as *strövling*) so that it could be seen when the boot shaft was folded down. However, here the boot shafts have been folded up for horseback riding. We might assume that although dressed in all his finery, Gustavus Adolphus urgently needed to inspect some detail of the ongoing siege works. Having arrived on the scene and dismounted, he has donned his heavy siege gorget for additional protection and is in the process of exchanging his hat for a siege helmet (illustrated in Plate 2). Note his command baton which incorporates the near-sighted King's spyglass, of a design introduced by the German-Dutch spectacle-maker Johann Lipperhey in 1608 and improved by Galileo Galilei in 1609.

Plate 1: The Swedish army at home, 1618

Left: Cuirassier, retinue of nobles

In the early years of the reign of Gustavus Adolphus, there were few cuirassiers in the Swedish army, notably the handful which the nobility still provided to the retinue of nobles. Gustavus Adolphus did not hold them in high regard and after the Kalmar War reportedly described the unit as a 'loose bunch of useless men'. As a result, the retinue of nobles was not called up during Gustavus Adolphus's overseas wars and was regarded as part of the defence of the homeland. Instead, from 1622 onwards, the King encouraged the raising of units of enlisted cuirassiers. These provided the backbone of the cavalry that he needed overseas. During the early reign of Gustavus Adolphus, Swedish cuirassiers looked much the same as those on the Continent. This cuirassier wears a burgonet, a gorget, three-quarter armour that covers the entire upper body and both arms as well as the front half of the legs down to and including the knee, and high riding boots. Like most cuirassiers, his armour has been blackened. Until about 1620, most breastplates were of the peascod belly or goose belly type, which then fell out of fashion. This cuirassier is armed like most, with a pair of wheellock pistols and a rapier. Early pistols were generally longer than those that came later. The cuirassier wears a blue sash. This was not a national identifying sign, and other sash colours were in use, too. Blue sashes seem not to be mentioned in the written sources from the early period, but they do appear in near-contemporary paintings, including those of Gustavus Adolphus. However, sometimes these paintings were made later than the events they portray, which makes the information in them difficult to verify.

Right: Musketeer, Östergötland territorial regiment
In 1617, Gustavus Adolphus established a first system of permanent territorial regiments of foot as a means of organising his conscripts. At this time, most infantrymen, whether musketeers or pikemen, were issued with both armour and helmet. This musketeer carries a heavy Dutch 10-bore matchlock musket, for which he uses a fork rest. He wears a leather bandolier slung over the left shoulder holding a powder horn, an ammunition pouch, and twelve or more wooden flasks for gunpowder, each with enough powder for a single shot. As a sidearm, he carries a typical 'Swedish-style' rapier, which in reality is an import from the Dutch Republic. His jacket and breeches are made from the same cloth, and he also wears a cheap type of Spanish collar. Although a musketeer, he still wears both breastplate and backplate as well as an infantry helmet. It is known that there was an ambition already early in the reign of Gustavus Adolphus to have all men of a given company wear uniform dress. Here we conjecture the choice of blue for some companies within the Östergötland territorial regiment because it is known that Östergötland infantry some years later predominantly wore blue.

Plate 2: The Swedish army in Livonia, 1621–1626

Left: Finnish armoured cavalryman, Colonel Åke Tott's Finnish Cavalry
The cavalry was raised as companies but fought in squadrons. During the war in Livonia, cavalry organisation had not yet found its final form. Gustavus Adolphus needed armoured cavalry, preferably cuirassiers, to withstand heavy cavalry such as Polish hussars. However, even many nobles could not afford the full equipment of a cuirassier. Besides, there was a tendency over time to make the armour lighter in weight by removing unneeded components. This Finnish cavalryman wears a lobster-tailed pot helmet (*zischägge*), a new type of helmet that first reached Sweden through Muscovy and the Polish-Lithuanian Commonwealth, a gorget, breastplate, backplate, and armour for the shoulders and upper arms. However, he does not have the full set of three-quarter armour which also would cover the lower arms and the front half of the legs down to and including the knee. Instead he has added some armour at the waist including a culet, a piece of plate armour consisting of small, horizontal lames that protect the small of the back and the buttocks. The cavalryman does wear the customary high riding boots. Like most cavalrymen, his armour has been blackened, and he wears it above a buff coat for comfort and additional protection. He is armed with a pair of long wheellock pistols and typical 'Swedish-style' rapier.

Right: Gustavus Adolphus in siege armour
Sitting in his field chair, Gustavus Adolphus surveys the ongoing siege works somewhere in Livonia. The chair is preserved in the Royal Armoury, Stockholm. So is the King's shot-proof siege helmet (*pot de pionier*), a heavy item with a weight of 15.77kg which was made in 1623, probably by Mårten Hindersson, a Stockholm armourer. Gustavus Adolphus wore it during siege works for additional protection, on top of padded headgear.

As further protection, the King wears a buff coat and a heavy siege gorget. Now a seasoned campaigner, he has abandoned the expensive dress that he previously wore for still expensive but sturdier and more modest clothes that function better on the battlefield. He wears a blue sash, which is known from several contemporary portraits of the King, but there is as yet no intention of regarding blue as a national identifying sign. The decorated siege gorget carries, in gold, the words *Gustavus Adolphus Rex Sueciae* ('Gustavus Adolphus, King of Sweden') in abbreviated form as well as the word *Jehovah*, a term for God. It was long believed that these decorations were completed already in the King's lifetime to emphasise the religious aspects of his war against the Catholic powers. However, a more recent interpretation is that the words and other decorations were added after the King's death, in commemoration of his rule, and that the gorget was plain black when Gustavus Adolphus used it (as depicted on the rear cover).

Plate 3: The Swedish army in Livonia, 1621–1626

Left: Musketeer in winter clothes

In northern Europe, campaigns took place in winter as well as in summer, and then warm clothes were sorely needed. This musketeer, somewhere in Livonia, wears a fur coat and woollen stockings in addition to his regular uniform, as per Gustavus Adolphus's instruction of 1622, which requested all governors to supply winter clothes to the soldiers. Since the issued winter clothes were manufactured by peasants throughout the Swedish realm, they were probably not uniform in colour or style. In addition, the soldier has acquired a fur hat, unless this, too, was supplied by the Crown, and a cloak for additional warmth. He has also taken up the new fashion of smoking a pipe. The use of tobacco for smoking was not yet common in Sweden, but it would rapidly gain in popularity and by the latter half of the Thirty Years' War, the practice was ubiquitous. The musketeer carries the standard heavy Dutch 10-bore matchlock musket, which he uses with a fork rest. He wears a leather bandolier slung over the left shoulder holding a powder horn, an ammunition pouch, and gunpowder flasks. However, as a sidearm, he carries an axe instead of a rapier. In the early years of the reign of Gustavus Adolphus, there were simply not enough rapiers to arm all infantry, so some carried axes instead.

Right: Lapp musketeer

During his campaigns in the Commonwealth, Gustavus Adolphus had to recruit archers to protect the infantry while on the march. The archers probably included Lapps (Sami) from northern Scandinavia since they were known as excellent bowmen and ski-troops. However, like other northerners who used skis, by this time most would carry muskets instead of bows. This Lapp musketeer wears traditional dress, at this time often made of reindeer hide, not because he is a Lapp but because cloth for uniforms was not always available and many new soldiers were embarked for service overseas in the clothes in which they arrived at the point of departure. He is armed with a snaplock (snaphance) musket which is sufficiently light that he does not need a fork rest. Most likely, this musketeer operates in a skirmish role, under winter conditions probably equipped with skis. He might even have a bow among his gear. Some of his personal belongings can be recognised as Lapp in origin, including the knife. However, most distinctive are his shoes. Well-insulated Lapp shoes were much desired for operations during winter conditions, and many were manufactured for the Crown and distributed to the army.

Plate 4: The Swedish army in Prussia, 1626–1629

Left: Pikeman, Norrland territorial regiment
This pikeman is based on the aforementioned 1626 painting by Nicolas de la Fage which depicts the Norrland territorial regiment. He belongs to the same company as the captain on the front cover, that is, the field regiment headed by Colonel Jacob Duwall which primarily consisted of men from the northern province of Hälsingland. The regulation length of a pike was 9 cubits (5.35m), which corresponded to Continental practices. The pike-head was made of hard steel, about 10–14cm in length (longer if the socket was included), and four-sided in shape. The pike shaft had a diameter of about 3–3.75cm and was from the head downwards strengthened by two iron reinforcements, 50–70cm in length. This pike may have been recently issued, since it is unpainted. Most pike shafts appear to have been painted black, since this seems to have been a common practice in Germany and, based on the surviving pikes, which of course may have been painted later, the practice was common in Sweden, too. Pikemen wore a full set of armour consisting of helmet, gorget, cuirass consisting of both breastplate and backplate, and tassets to protect the upper thighs. Each tasset was manufactured as one piece to save money, even though it was designed to look, from a distance, as if it was made of several lames, that is, overlapping plates of metal forming a flexible defence, as in the style of more expensive armour. Moreover, the common pikeman's armour was not shot-proof. As a sidearm, each pikeman carried a rapier, or an axe if rapiers were unavailable. This pikeman wears the entire regulation-issue kit to which he has added a sleeveless buff coat under his armour for convenience and added protection.

Right: Musketeer, Norrland territorial regiment
This musketeer belongs to the same company as the pikeman next to him. He is armed and equipped in the same manner as the musketeer illustrated in Plate 1, which belongs to the previous decade. However, by the 1620s, musketeers had discarded both breastplates and backplates. They still retained their helmets, however. This musketeer may be a corporal, which would explain why he also wears a gorget as a symbol of rank. However, the original painting from 1626 suggests that not only corporals wore gorgets but most musketeers in the regiment. Besides, based on the painting it appears that the musketeers did not wear bandoliers for their musket-related accoutrements. It is possible that the musketeers of this company instead

used paper cartridges, each containing a measured charge of gunpowder, since such cartridges already were in use. If so, the cartridges were kept in a cartridge box on the belt. However, paper cartridges were far more common in the cavalry than in the infantry.

Plate 5: The Swedish army in Pomerania, 1630

Left: Veteran musketeer

The Swedish army which invaded Pomerania in 1630 included many fresh units, but among them was also a significant contingent of veterans from the war in Prussia. This musketeer is one of these veterans. Although he carries the standard arms and equipment of a musketeer, he has added a buff coat for added protection. We do not know whether he once had a standard-issue helmet or merely wore some other kind of headgear, but it is now replaced with a lobster-tailed pot helmet which the soldier no doubt acquired somewhere in the Commonwealth.

Right: Artilleryman

Artillery personnel were enlisted among semi-civilian professionals. There was not yet any real separation of Sweden's armed forces into an army and a navy, and artillerymen served both on land and at sea, in the latter case as gunners. For this reason, this artilleryman's dress is based on archaeological finds from the warship Wasa, which sunk in 1628. Artillerymen generally dressed similarly to the infantry. For obvious reasons, artillery officers wore more elaborate clothing than the common artillerymen. Most, including this man, appear to have worn grey clothes, and this eventually became common practice for artillerymen in the Swedish army. It may be assumed that grey clothes were deemed more suitable to the rough work of servicing the cannons. Artillerymen were armed with muskets and rapiers for personal protection. However, such weapons interfered with the serious work of handling the cannons, so this artilleryman has left his rapier in some convenient location.

Plate 6: The Swedish army at Breitenfeld, 1631

Left: Musketeer, Colonel Robert Monro's Scottish Regiment

Scottish soldiers constituted a large share of the Swedish army, but they were not often recognisable as such. The vast majority wore the same uniforms, weapons, and equipment as the rest of the army. However, many fresh recruits found that cloth for uniforms was not yet available and many new soldiers were embarked for service in the clothes in which they arrived at the point of departure. This musketeer is one such fresh recruit. He has received a matchlock musket and the necessary accoutrements. However, he has not yet been issued with either cloth for a uniform, helmet, or sidearm. Instead he wears the clothes in which he arrived and a sidearm which he may have brought from home. The musketeer has not even been able to replace his broken shoe, which did not survive the long march from the port of arrival to the field army in central Germany.

Right: Cavalryman, Västgöta Cavalry Regiment

The light horse, so named because of their light armour since no Swedish cavalry operated in a skirmish role on the battlefield, was always far more common in the Swedish army than the cuirassiers. Except for the aforementioned retinue of nobles, all Swedish national cavalry units consisted of light horse. According to regulations of 1618 and 1621, each light horseman should wear helmet and cuirass, consisting of a shot-proof breastplate and backplate, and be armed with a pair of wheellock pistols and a rapier (in the manner of the armoured cavalryman in Plate 2). However, as the war continued and arms supplies grew scarce, an increasing number of Swedish light horse began to operate without helmets and armour. This may also have been part of the ongoing trend to discard what the men regarded as unnecessary, cumbersome equipment. Judging from contemporary illustrations, many did not even wear a buff coat. However, there was still an understanding that armour was beneficial on the battlefield. When cuirasses and helmets were too few, the commanders accordingly had these items distributed exclusively to the men in the front ranks of the unit. This cavalryman of the Västgöta Cavalry Regiment has discarded all armour. He carries a rapier and we can be certain that he also brings two wheellock pistols, carried in holsters fixed to the front of his saddle. As for dress, he wears only a cloth jacket and a wide-brimmed felt hat. He may well have stored his armour in the supply train, but as for now, he is dressed for escort duty or the foraging for supplies, not for battle. Unless an enemy force was known to be in close vicinity, there was no need for the swift-moving cavalry to dress in battle armour.

Plate 7: The Swedish army at Lützen, 1632

Left: Pikeman on ceremonial duty, Drabant Guard

The Drabant or Life Guard company was an independent infantry unit fielded with the Household Regiment (Yellow Regiment). Although used for parades and ceremonial occasions, the Guard remained a fighting unit and was organised, as other field units, into pikemen and musketeers. It also functioned as a kind of training establishment for officers. Because of its ceremonial duties, the Guard was issued with several sets of costly uniforms and arms. By the time of the battle of Lützen, the men of the Guard wore grey hats and grey cloaks over their elaborate buff coats. The unit's pikemen generally used partisans when on guard duty. Halberds might appear as well, although they no longer were general issue within the army. At the battle of Lützen, the Guard as usual fought as part of the Yellow Regiment, and this man would simply pick up his pike and join the ranks.

Right: Cavalry trumpeter

Trumpeters played an important role in command and control, since their signals were used to relay orders. However, they also functioned in a diplomatic capacity. A trumpeter was customarily sent to initiate negotiations. For this reason, trumpeters were provided with good clothing so that they would make an impact. For the same reason, a cavalry trumpeter, whenever possible, was provided with a piebald horse. This trumpeter is dressed in a casack clearly inspired by Polish fashions. Incidentally, most commanders wanted their trumpeters to be reasonably educated and intelligent men, so that when sent as emissaries, they also could observe and make notes on the enemy's strength and position.

Plate 8: The Swedish army at Lützen, 1632

Left: Pikeman, Yellow Regiment

In 1626, the Household Regiment received new uniforms of yellow cloth. From this time, it became known as the Yellow Regiment. In Germany, the men of the regiment became known as 'yellowcoats' (*Gelbröckel*). This may also have been the result of a trend in fashion which led to jackets growing longer, developing into coats (illustrated by the coats of these two soldiers from the Yellow Regiment and the cavalryman in Plate 6, as compared to the infantrymen in Plate 4). Otherwise, this pikeman wears standard-issue armour and weapons, which has not changed significantly since the 1620s. However, by this time, the war economy had forced the Crown to cut costs. Cheaper helmets had been introduced, many of which incorporated fixed one-piece ear covers so as to provide additional protection. The cheaply made one-piece tassets to protect the upper thighs remained in use, too, although some men discarded them, preferring to go without.

Right: Musketeer, Yellow Regiment

Like his pikeman colleague, this musketeer wears the standard yellow uniform of his regiment. As compared to previous practices, this musketeer has abandoned both helmet and fork rest. Instead of a helmet, he wears a more comfortable wide-brimmed grey felt hat. The 10 bore matchlock musket has grown lighter, so a fork rest is no longer required to handle the weapon. Still, fork rests would remain in general use within the Swedish army for decades, so this man's lack of fork rest may be the result of his personal initiative or, perhaps more likely, his being 'detached' for other duties. Certain units of Swedish musketeers were detached for duties ranging from foraging to operating in support of a cavalry formation. In German, French, and English, the detached musketeers became known as 'commanded musketeers'.

Plate 9: The Blue Regiment of Foot

This and the following plate show the colours of all 10 companies of the enlisted Blue Regiment of Foot, the second in rank of the colour regiments of Gustavus Adolphus. Unsurprisingly, the Blue Regiment carried colours the base colour of which was blue with decorations in yellow. The Blue Regiment was probably established in 1624 by Georg von Arnim and received its name in 1626. However, the regiment probably received these particular colours in 1627. The colours are depicted in the tattered condition in which they were carried in 1632, after five years of battles. When issued, the colours likely had a breadth and length of 1.5–2m, as did most infantry colours issued from this time on.

We know the appearance of many Swedish flags from the period because they were depicted in a book by Reginbaldus Möhner, a monk in Augsburg who in the period from 1632 to 1635 painted a large number of flags and standards from both Swedish units and their opponents. The illustrations here are photographs of copies, deposited in the Swedish Military Archives, of the originals painted by Möhner. The copies, probably made in the early 1930s in connection with the research carried out for the General Staff work *Sveriges Krig*, were according to a handwritten note made by a Major E. Nordenfalk. This would likely be Major Erland Nordenfalk, who was later director of the Löfstad Castle Museum. However, it remains possible that the copies instead were made by Major Ejnar Nordfeldt of the General Staff's Department of Military History, who was engaged in the Thirty Years' War research project and made many of the maps and sketches published by the project. Since all participants in the project have passed away, it was not possible to reach a certain conclusion on the illustrator's identity.

Plate 10: The Blue Regiment of Foot (continued)

The remaining colours of the Blue Regiment of Foot, in the same tattered condition as the previous ones. We know that they were carried at the battle of Lützen in 1632, since the Imperial Quartermaster-General Giulio Diodati claimed to have captured many of the standards of the Blue and Yellow Regiments but left them on the field because they were so dilapidated, indeed mere poles.

The Blue Regiment took appalling casualties at Lützen but retained its identity and remained in Swedish service until it was dissolved in 1652. From 1634 onwards the regiment, then often known as the 'Old Blue Regiment' (*Alt-Blau Regiment*), functioned as the senior regiment of the army in Germany and the Life Regiment of Foot of, in turn, Field Marshals Banér, Torstensson, Wrangel, and Charles Gustavus. It also received new colours, which will be illustrated in Vol. 2 of *The Lion from the North* (forthcoming).

Plate 11: Green Regiment of Foot (11.1, 11.2, 11.3); Christoph von Houwald's Regiment of Foot (11.4)

The Green Regiment of Foot was originally a Brandenburg expeditionary corps to the Polish-Lithuanian Commonwealth. In Prussia, the regiment went into Swedish service as an enlisted unit in 1627, when Gustavus Adolphus ordered new green colours for them and named the formation the Green Regiment. In 1628 many Scots and English joined the regiment. By the time of the battle of Lützen, the regiment had become Bernard of Saxe-Weimar's Green Life Regiment and later followed him into French service. Only three of the regiment's colours are known, and their patterns are strikingly similar to those of the Blue Regiment, which supports the supposition that both received new colours at the same time.

Colonel Christoph von Houwald's Regiment of Foot was raised in early 1632 in the area around Frankfurt-am-Main and served as an enlisted unit. Möhner only depicted one of the regiment's colours. The letter G is believed to have signified Gustavus Adolphus.

Plate 12: The Orange Regiment of Foot

The Orange Regiment was raised in Brandenburg by Johann Vitzthum von Eckstädt in 1630. Möhner depicted the tattered colours of four companies of the regiment. This enlisted regiment remained in service for some years after the death of Gustavus Adolphus, and it is possible that Möhner saw them then, not in 1632.

Plate 13: General Johan Banér's Regiment of Foot

Möhner copied the colours of eight companies of General Johan Banér's Regiment of Foot. This regiment was raised in Germany in 1630. However, the regiment never reached its establishment strength, so in spring 1631, Banér's Regiment absorbed the men of Dietrich von Falkenberg's Regiment, which had been raised in 1629 but, like Banér's unit, apparently never reached establishment strength. Falkenberg's Regiment had been one of those known as the Black Regiment, so it presumably carried black colours. The colours illustrated here were likely issued after the merger of the two regiments, since Banér's Regiment before then probably did not yet consist of eight companies.

It was only Banér's Life Company which carried a white colour (top). Eventually, the use of a white colour for the colonel's life company became commonplace in the Swedish army, but at this time, only some regiments had adopted the custom. This particular colour shows the greater coat of arms of the Kingdom of Sweden, which is better illustrated in 15.2. Blessed by the Hand of God, this symbol proves the regiment's strong link with the Swedish Crown despite the fact that the regiment was enlisted on the Continent.

Plate 14: General Johan Banér's Regiment of Foot (continued)

Banér's Regiment participated in the battle of Breitenfeld in 1631. It remained in service, mostly but not invariably with the field army commanded by Banér. For instance, the regiment took part in the battle of Nördlingen in 1634. After the battle, the survivors were merged with and brought into the Green Regiment, then under Adam von Pfuel. The Green Regiment, but not Pfuel, later went into French service with Bernard of Saxe-Weimar.

Plate 15: Infantry company colour, *c.* 1615 (15.1); His Royal Majesty's Life Guard Company colour, 1631–1632 (15.2)

Until 1620, Swedish infantry colours were 3–4m in breadth and length. The early infantry colour (15.1) carries the royal cypher of King Gustavus Adolphus and has been dated to *c.* 1615. Preserved in the Army Museum, Stockholm, its present size is 330 x 380cm but it is possible that it originally was longer (ST 16:87). The pole was green.

In comparison, the colour of His Royal Majesty's Life Guard Company (15.2), firmly dated to 1631–1632, was smaller. It is believed that from 1621 onwards, Swedish infantry colours became smaller, usually with a breadth and length of 1.5–2m. Möhner's depictions consistently show infantry colours with a significantly greater length than breadth. Based on the dimensions of the cloth known to have been issued for this particular colour, its breadth has been estimated at about 2m while its length likely was 2.25m. Nonetheless, Möhner's illustration suggests an even greater length.

The Life Guard Company's colour was always black decorated with gold, since black and yellow were the colours of the House of Vasa. The standard is believed to have had an elaborate gilded finial.

Both illustrations are reproduced with the permission of Medströms publishing company.

Plate 16: Åke Tott's Cavalry Regiment

Åke Tott's Cavalry Regiment was raised in 1625–1626 as a cuirassier company. Cavalry companies carried standards of a type known as cornet. A cornet was usually about 50–55cm in breadth and 50–70cm in length and edged with a fringe of thread. Based on surviving samples in the Trophy Collection, Stockholm, cornet poles were usually painted, and the cavalry company commonly flew its cornet from a fluted lance.

The Germans considered Tott's name particularly sinister, since its pronunciation could be taken to mean 'death' in German. Tott accordingly gave his cavalry regiment cornets all of which depicted a skull. Möhner depicts the fringes of thread as black, except for the white cornet of the life company (top), but it is known from the materials issued that the fringes consisted of mixed yellow and black thread.

Plate 17: Åke Tott's Cavalry Regiment (continued)

Over time, the aggressive Tott became commander of all Finnish cavalry in Prussia, and at some point, his life company grew into a cavalry regiment. In 1632, Tott commanded the army in the Lower Saxon Circle. Möhner copied seven cornets from Tott's regiment.

Plate 18: The Red Regiment of Foot

The Red Regiment was enlisted in Germany in 1624 by Franz Bernhard von Thurn, a Bohemian exile who had gone into Swedish service after the failed Bohemian Revolt. The regiment probably received these colours in 1627, when it is known that the regiment received new red colours. Besides, the style of the colours is reminiscent of those of the other colour regiments which received new standards in this year. Möhner copied three colours of the Red Regiment.

Plate 19: Major General Balthasar Jacob von Schlammersdorff's 'Old' Regiment of Foot

Möhner copied all 12 company colours of Major General Balthasar Jacob von Schlammersdorff's 'Old' Regiment of Foot. The Schlammersdorff family provided several officers and regiments to the Swedish army. Although a national Swedish field regiment would be divided into eight companies, regiments enlisted on the continent frequently included more companies, often 12. The abbreviation of the first colour, G.A.S.R., reads Gustavus Adolphus, Sweden's King (*Gustavus Adolphus Sueciae Rex*), which showed the allegiance of the regiment. If correctly depicted, this was a variant of the far more common abbreviation G.A.R.S., meaning Gustavus Adolphus, King of Sweden (*Gustavus Adolphus Rex Sueciae*).

Plate 20: Major General Balthasar Jacob von Schlammersdorff's 'Old' Regiment of Foot (continued)

The remaining six colours of Major General Balthasar Jacob von Schlammersdorff's 'Old' Regiment of Foot.

Plate 21: Colonel Robert Monro's (Mackay's) Regiment of Foot

In 1629, Sir Donald Mackay, 1st Lord Reay, raised Mackay's Regiment for service on the continent. Among the men was Robert Monro, who later became colonel of Mackay's regiment. Monro and others had already been in Danish service, including at the siege of Stralsund, when they were enlisted by the Swedish Crown. In 1630, Mackay and Monro went to Stockholm to learn how to form up the regiment in the new, Swedish style. Mackay's Regiment then served in the Swedish army with considerable distinction, a story described by Monro in what may be the world's first regimental history, the well-known *Monro, His Expedition with the Worthy Scots Regiment*. Möhner copied the colours of seven companies of the regiment. Following the Swedish manner, the first company, the colonel's life company, carried a white colour. All colours show the abbreviation G.A.R.S., meaning Gustavus Adolphus, King of Sweden

(*Gustavus Adolphus Rex Sueciae*), to show the allegiance of the regiment.

Plate 22: Colonel Robert Monro's (Mackay's) Regiment of Foot (continued)

The remaining three colours of Colonel Monro's (Mackay's) Regiment of Foot. Raised in Scotland, Mackay's Regiment was sometimes fielded within the Green Brigade, together with the predominantly Scottish Green Regiment.

Plate 23: Colonel Thomas Sigmund von Schlammersdorff's 'Old' Regiment of Foot

Colonel Thomas Sigmund von Schlammersdorff's Regiment of Foot was an enlisted unit raised in 1631. Its colours have been interpreted as olive green and white. Möhner depicted 11 colours, which suggests that it consisted of 11 companies.

Plate 24: Colonel Thomas Sigmund von Schlammersdorff's 'Old' Regiment of Foot (continued)

Colonel Thomas Sigmund von Schlammersdorff's Regiment of Foot surrendered at Neuburg-an-der-Donau in Bavaria in 1633 and lost its colours. Since Colonel von Schlammersdorff then raised a new regiment, the surrendered regiment henceforth was referred to as the 'old' regiment.

Plate 25: Colonel Adam Schaffman's Cavalry Regiment

As noted, many Bohemian nobles went into Swedish service after the failed Bohemian Revolt. One of them was Colonel Adam Schaffman, who raised an enlisted cavalry unit primarily among fellow Bohemians and Silesians. Möhner copied four company cornets of Schaffman's Cavalry Regiment. Note the fringes and, in one case, the tassel hanging from the pole.

Plate 26: Uppland Cavalry Regiment

The Uppland Cavalry Regiment was a national Swedish unit also known as the Life Regiment of Horse or the Red Life Regiment of Horse. This was surely a reference to the colour of the regiment's red cornets, which were first issued in 1627, and the fact that the Uppland Cavalry Regiment was the senior Swedish cavalry regiment, after the Retinue of Nobles which did not serve in Germany. The four companies of the Uppland Cavalry Regiment fought at Lützen in 1632 as well as in later battles, including that of Wittstock in 1636 and during the subsequent Swedish invasion of Denmark in 1644.

The Uppland Cavalry Regiment consisted of men not only from Uppland but also from the provinces of Västmanland, Närke, and Värmland. This is also evident from one of the company cornets (26.4), which displays the provincial coat of arms of Västmanland.

Plate 27: Yellow Regiment of Foot

In 1626, the entire Household Regiment received yellow uniforms, after which it was referred to as the Yellow Regiment. The regiment probably received yellow colours in 1627, at the same time as the other senior colour regiments. Möhner copied only two colours of the Yellow Regiment. Since neither is depicted as tattered, it is likely that both were replacements received after the battle of Lützen. An enlisted unit, the Yellow Regiment later followed Bernard of Saxe-Weimar into French service.

Plate 28: Gustav Horn's Dragoon Regiment

Möhner depicted two types of guidons from Gustav Horn's Dragoon Regiment but he mentioned that the regiment had five guidons in total. Like all Swedish dragoon units at the time, Gustav Horn's Dragoon Regiment was an enlisted unit. It included three companies in 1633 but had grown into six companies by the time of the battle of Nördlingen in 1634. Otherwise little is known of Horn's dragoons. Dragoon guidons commonly were about 1m in breadth and 1.4–1.8m in length. They typically had swallowtails. However, according to Möhner, Gustav Horn's Dragoon Regiment carried two flags of the red swallow-tailed type and three of the yellow single-tailed variety. The guidons were likely issued on separate occasions, as new companies were raised. The red swallow-tailed guidon shows a tassel hanging from the pole.

Plate 29: Colonel von Isenburg-Büdingen's Regiment of Foot

Only two colours of Colonel Wolfgang Heinrich von Isenburg-Büdingen's Regiment of Foot were copied by Möhner. It was quite common for enlisted units to carry colours that advocated an ideological message, and sometimes humour was used as well. The first one is typical of this variety, depicting a burly Protestant peasant who chases a scared Jesuit.

Plate 30: Major General Patrick Ruthven's Regiment of Foot

Möhner depicted Major General Patrick Ruthven's Regiment of Foot in or soon after 1632. Ruthven had enlisted a regiment of foot in Britain already in 1629 but it had ended up in a garrison in Prussia. These colours probably belonged to a regiment which Ruthven enlisted in Germany in early 1632. Möhner only illustrated two colours, and both are quite simple in appearance.

Plate 31: White Regiment of Foot

The White Regiment was an enlisted unit of 12 companies which originally constituted the garrison of Stettin, Pomerania. Both the regiment and its commander, Siegfried von Damitz, went into Swedish service when Stettin surrendered in 1630. Probably because of its colours, it became known as the White Regiment. Damitz remained in command until he fell at Breitenfeld in the following year. Command was then given to William Burt, a Scotsman, but he, too, soon fell in battle. By then, the regiment was already known as the 'Old White Regiment' (*Alt-Weiß Regiment*). The regiment served at Lützen under Dodo von Innhausen und zu Knyphausen. It remained in Swedish service and is known to have served under Lennart Torstensson in 1635.

Möhner's depictions of the colours of the regiment show three seemingly intact colours and seven very tattered ones. This suggests that some colours had been replaced after the battle of Breitenfeld. These, however, may well have been made in the same style as the previous ones. The intact colours are decorated with the characteristic abbreviation G.A.R.S. and a variety of Swedish emblems including the wheatsheaf, the dynastic symbol of the House of Vasa.

Plate 32: Colonel Georg Wulf von Wildenstein's Black Regiment of Foot (32.1); Colonel Caspar Ermes's Regiment of Foot (32.2)

Colonel Georg Wulf von Wildenstein's Black Regiment of Foot was at Lützen fielded within the Green Brigade, which only shows that brigades were ad hoc formations, formed up as needed. The regiment's colours, as copied by Möhner in the months before the battle of Lützen, is possibly the most tattered of the lot. We can assume that the white colour was carried by the life company. The regiment's colours must have been, if possible, even more dilapidated after the battle, in which Wildenstein fell.

Caspar Ermes was promoted to colonel in 1633 and in the following years became commandant in Augsburg, where Möhner must have seen these tattered colours. Ermes is known to have commanded Finnish troops, so it is possible that these ragged remains were used by them – yet another eloquent picture of how standards looked after a few years of campaigning.

Further Reading

The English reader is well supplied when it comes to sources on the Swedish army in the Thirty Years' War, due to the wealth of contemporary information in books such as *The Swedish Intelligencer*, *The Swedish Discipline*, and Colonel Robert Monro's regimental history *Monro, His Expedition with the Worthy Scots Regiment*. There is also Sir James Turner's *Pallas Armata*, which although published many years later, includes glimpses of the Swedish army in action in Germany. In other European languages, there is *Le soldat suedois*, a contemporary history of the war compiled by Friedrich Spanheim the Elder, apparently from the materials of and at the request of the Swedish diplomat Christofer Ludwig Rasche (1584–1645). Spanheim's book was published in French, Italian, and German. In German, we also have Bogislaff Philip von Chemnitz's *Königlichen Schwedischen in Teutschland geführten Kriegs*, which was the official Swedish history of the war, and the multi-volume *Theatrum Europaeum*, a chronicle of events in Europe in the period 1618–1718 by the publisher Merian in Frankfurt-am-Main, which provides numerous details and illustrations. There are also many contemporary sources to the events of the war, quite a few of which contain details of military interest. A key work here is *Geschichte des ersten schwedisch-polnischen Krieges in Preussen* by Israel Hoppe (1601–1679), who saw the Swedish army in action in Prussia before it invaded Germany. In German, there are also two military manuals which describe the Swedish model of war: Lorentz von Troupitzen's *Kriegs Kunst* and Wendelin Schildknecht's *Harmonia in fortalitiis construendis, defendendis & oppugnandis*, both of which describe the doctrine introduced by Gustavus Adolphus, even though both were published after his death, when some organisational details had changed.

Having said this, sources such as *The Swedish Intelligencer*, *Le soldat svedois*, and *Theatrum Europaeum* are compilations of newsletters and propaganda, for which reason they cannot always be taken at face value. Even Monro, who was an officer in the Swedish army, and Chemnitz, who was the official Swedish historian, used such materials to describe events of which they had no personal knowledge. Their information must accordingly be assessed with care when used as sources. As for the prints of battles in the *Theatrum Europaeum*, due to artistic license they were regarded as unreliable sources even by contemporaries.

A key modern reference work to the wars of Gustavus Adolphus is the multi-volume *Sveriges krig 1611–1632* by the Swedish General Staff, published in 1936–1939. This work contains many valuable archive documents relating to the Swedish army under Gustavus Adolphus and is reliable in its use of official records including orders of battle, casualty lists, and logistical inventories. However, its conclusions on tactics and strategy cannot always be taken for granted due to bias in favour of Gustavus Adolphus and extrapolation from developments which took place much later. For instance, the prominent military historian Hans Delbrück greatly influenced the historians of the Swedish General Staff, and a major thread in Delbrück's work was the choice between strategies of annihilation and attrition.[1] Delbrück argued that a strategy of annihilation stands in opposition to a strategy of attrition. Since prevalent Swedish military thinking was that the strategy of annihilation was superior, the General Staff authors wanted to show that Gustavus Adolphus must have followed such a strategy.[2]

The existence of such assumptions often becomes clear from the second key reference work to the wars of Gustavus Adolphus: the multi-volume *Kungl. Svea livgardes historia*, by Bertil C:son Barkman and others, which describes the history of the Swedish Royal Life Guard. Although this work covers a far longer period of time than the General Staff work and, since it focuses on the Life Guard, does not cover every incident of the war, it updates and often provides a better reading of the sources than the General Staff work (in which Barkman indeed was involved). Publication started in 1937 and was not concluded until 1983. Some additional information is provided by other regimental histories, of which the multi-volume *Kungl. Artilleriet*, by Jonas Hedberg and others, which describes the history of the Royal Artillery, is the most useful. Publication began in 1975 and apparently reached its conclusion in 2011.

In comparison, more recent *general* works in Swedish on the wars under Gustavus Adolphus are most often derivative and contain little new analysis, although particular aspects have been the subject of often excellent articles and monographs. The beautifully illustrated *Gustav II Adolf och hans folk*, by Göte Göransson, should be mentioned, since it includes a wealth of information on events and dress at the time, including those relating to military matters. Published in 1994, it was the result of years of research into primary sources.

As for works in English, the two-volume *Gustavus Adolphus: A History of Sweden 1611–1632*, by Michael Roberts, holds a prominent position, with most conclusions on military matters deriving from the General Staff work. It was published in 1953–1958. More recent works include the two volumes by Richard Brzezinski on *The Army of Gustavus Adolphus* and his book on *Lützen 1632*, published between 1991 and 2001. Both Roberts and Brzezinski worked with Swedish primary sources, and Brzezinski was also able to make good use of the many monographs on the army of Gustavus Adolphus by then published in Swedish.

---

[1] Attrition and annihilation are here used for Delbrück's terms *Ermattungsstrategie* (strategy of exhaustion, that is, with limited objectives) and *Niederwerfungsstrategie* (strategy of overthrow, that is, with the objective of disabling the opponent's military capacity) despite not being literal translations, since this is how his work was translated into English.

[2] Strategy of attrition: The general decides from moment to moment whether to achieve his goals by battle or manoeuvre. Strategy of annihilation: The general sets out directly to attack the enemy, destroy his armed forces, and thereby impose the will of the victor on the conquered until the defeated side accepts his conditions.

Since most other works on the army of Gustavus Adolphus are published in other languages than English, the following bibliography is limited to the works most frequently referenced in notes and most useful for continued research. Other works are only mentioned in the notes.

Bibliography

Printed Contemporary Sources and Compilations

Anonymous, *Le soldat svedois ov Histoire de ce qui s'est passé en Àllemagne depuis l'entrée du Roy de Suede en l'année 1630 jusques apres sa mort*. np, 1633. Compiled by Friedrich Spanheim the Elder and published in several editions and locations. The version used here is from the Bavarian State Library

Anonymous, *The Swedish Discipline, Religious, Civile, and Military* 1–3. London: Nathaniel Butter and Nicholas Bourne, 1632. Edited by William Watts. (Reprinted in facsimile by Pallas Armata, Tonbridge, Kent, 1998)

Anonymous, *The Swedish Intelligencer* 1–4. London: Nathaniel Butter and Nicolas Bourne, 1632–1633. Compiled by William Watts. Reprinted in facsimile by Pallas Armata, Tonbridge, Kent, 1995

Chemnitz, Bogislaff Philip von, *Königlichen Schwedischen in Teutschland geführten Kriegs*. 2 vols (Stettin: Georg Rethe, 1648; Stockholm: Johannis Janssonius, 1653)

Galt, Peder, *Peder Galts depescher 1622–1624* (Stockholm: Historiska handlingar 26:1, 1920)

Gustavus Adolphus, *Konung Gustaf II Adolfs skrifter*, ed. C.G. Styffe (Stockholm: P.A. Norstedt & Söner, 1861)

Gustavus Adolphus, *Kriegsmanifest*, July 1630. Reprinted as 'Das schwedische Kriegsmanifest vom Juli 1630, Flugschrift, 1630.' Themenportal Europäische Geschichte, 2006 <www.europa.clio-online.de/quelle/id/q63–28306>

Gustavus Adolphus, *Krijgz articlar, som fordom then stormechtigste furste och herre, herr Gustaff Adolph, then andre och store, Sweriges, Göthes och Wendes konung, storfurste til Finland, hertig vthi Estland och Carelen, herre vtöfwer Ingermanland, &c. loffwerdigst i åminnelse hafwer låtit göra och författa, Anno M. DC. XXI* (Stockholm: Ignatio Meurer, 1621)

Hand, Johan, *Johan Hands dagbok under K. Gustaf II Adolfs resa till Tyskland 1620* (Stockholm: Historiska handlingar 8:3, 1879: 1–39)

Hoppe, Israel, *Geschichte des ersten schwedisch-polnischen Krieges in Preussen* (Leipzig: Duncker & Humblot, 1887). Vol. 5 of *Die preussischen Geschichtschreiber des XVI. und XVII. Jahrhunderts*

Merian, Matthaeus, *Theatrum Europaeum*, 21 vols (Frankfurt-am-Main: Matthaeus Merian, 1633–1738). Available from various web sites, including those of Universitätsbibliothek Augsburg <www.bibliothek.uni-augsburg.de> and Wolfenbütteler Digitalen Bibliothek <http://diglib.hab.de>

Monro, Robert, *Monro, His Expedition with the Worthy Scots Regiment (Called Mac-Keyes Regiment)*, 2 vols (London: William Jones, 1637. Reprinted in facsimile by Pallas Armata, Tonbridge, Kent, 1994)

Oxenstierna, Axel, *Rikskansleren Axel Oxenstiernas skrifter och brefvexling*, multiple volumes and database (Stockholm: P.A. Norstedt & Söner/Swedish National Archives (RA), 1888–2018)

Schildknecht, Wendeli, *Harmonia in fortalitiis construendis, defendendis & oppugnandis* (Stettin: Johann Valentin Rheten, 1652)

Svensson, Anders, *Svensk agent ved Sundet: Toldkommissær og agent i Helsingør Anders Svenssons depecher til Gustav II Adolf og Axel Oxenstierna 1621–1626* (Aarhus: Universitetsforlaget i Aarhus, 1971). Edited by Leo Tandrup

Troupitzen, Lorentz von, *Kriegs Kunst: Nach Königlicher Schwedischer Manier eine Compagny zu richten, in Regiment, Zug-vnd Schlacht-Ordnung zu bringen, zum Ernst anzuführen, zu gebrauchen, vnd in esse würcklich, zu unterhalten.* (Frankfurt-am-Main: Matthaeus Merian, 1633)

Turenne, *Histoire du vicomte de Turenne, Maréchal général des armées du Roi*, vol. 3: *Contenant les Mémoires du M. de Turenne* (Paris: Jombert, 1773)

Turner, Sir James, *Pallas Armata: Military Essayes of the Ancient Grecian, Roman, and Modern Art of War, Written in the Years 1670 and 1671* (London: Richard Chiswell, 1683)

Wallenstein, Albrecht von. *Albrechts von Wallenstein, des Herzogs von Friedland und Mecklenburg, ungedruckte, eigenhändige vertrauliche Briefe und amtliche Schreiben aus den Jahren 1627 bis 1634* (Berlin: G. Reimer, 1828–1829). Edited by Friedrich Förster

Wallenstein, Albrecht von, *Waldsteins Correspondenz: Eine Nachlese aus dem K.K. Kriegsarchive in Wien.* 2 vols (Vienna: Karl Gerold, 1865–1866). Edited by Beda Dudik

Wallhausen, Johann Jacobi von, *Kriegskunst zu Fuß* (Leeuwarden: Claude Fontaine, 1630. First published 1615)

Wallhausen, Johann Jacobi von, *Kriegskunst zu Pferdt.* Frankfurt-am-Main: Johann Theodor de Bry, 1616

Wallhausen, Johann Jacobi von, *Defensio patriae oder Landrettung* (Frankfurt-am-Main: Daniel Aubrij, David Aubrij, and Clement Schleichen, 1621)

Zeeh, Erik; and Nils Belfrage (eds), *Dagbok förd i det svenska fältkansliet 26 maj 1630–6 november 1632 (Journal de Gustave Adolphe)*, Stockholm: Historiska handlingar 30:3, 1940

Later Studies

Åberg, Alf, 'Gustaf II Adolf och hans skotska krigare.' *Livrustkammaren – Journal of the Royal Armoury* 16: 1 (1982): 1–21

Ahnlund, Nils, *Gustav Adolf den store* (Stockholm: Aldus/Bonniers, 1963. First published 1932)

Alm, Josef, *Blanka vapen och skyddsvapen från och med 1500-talet till våra dagar* (Stockholm: Rediviva, 1975. First published 1932)

Alm, Josef, *Eldhandvapen 1: Från deras tidigaste förekomst till slaglåsets allmänna införande* (Stockholm: Rediviva, 1976. First published 1934)

Alm, Josef, *Arméns eldhandvapen förr och nu* (Stockholm: Kungl. Armémuseum, 1953)

Alm, Josef, 'Flottans handvapen', *Sjöhistorisk Årsbok 1953–54* (Stockholm: Föreningen Sveriges Sjöfartsmuseum i Stockholm, 1954: 67–147)

Artéus, Gunnar, *Till militärstatens förhistoria: Krig, professionalisering och social förändring under Vasasönernas regering* (Stockholm: Probus, 1986)

Barkman, G. Bertil C:son, *Gustaf II Adolfs regementsorganisation vid det inhemska infanteriet: En studie över organisationens tillkomst och huvuddragen av dess utveckling mot bakgrunden av kontinental organisation* (Stockholm: Meddelanden från Generalstabens krigshistoriska avdelning, 1931)

Barkman, G. Bertil C:son, *Kungl. Svea livgardes historia* vol. 2: *1560–1611* (Stockholm: Stiftelsen för Svea livgardes historia, 1939)

Barkman, G. Bertil C:son and Lundkvist, Sven, *Kungl. Svea livgardes historia*, vol. 3:1: *1611–1632.* (Stockholm: Stiftelsen för Svea livgardes historia, 1963)

Barkman, G. Bertil C:son, Lundkvist, Sven, and Tersmeden, Lars, *Kungl. Svea livgardes historia* 3:2: 1632 (1611)–1660 (Stockholm: Stiftelsen för Svea livgardes historia, 1966)

Bellander, Erik, *Dräkt och uniform: Den svenska arméns beklädnad från 1500-talets början fram till våra dagar* (Stockholm: Kungl. Armémuseum/P.A. Norstedt & Söner, 1973)

Blackmore, David J., 'Destructive and Formidable': British Infantry Firepower, 1642–1765. Nottingham Trent University, dissertation, 2012.

Brzezinski, Richard, *The Army of Gustavus Adolphus* 1: *Infantry* (London: Osprey, Men-at-Arms 235, 1991)

Brzezinski, Richard, *The Army of Gustavus Adolphus* 2: *Cavalry* (London: Osprey, Men-at-Arms 262, 1993)

Brzezinski, Richard, *Lützen 1632: Climax of the Thirty Years War* (Oxford: Osprey Campaign 68, 2001)

Delbrück, Hans, *History of the Art of War* 4: *The Dawn of Modern Warfare* (Lincoln: University of Nebraska Press, Bison Books, 1990. First published 1920)

Droste, Heiko, 'Johan Adler Salvius i Hamburg: Ett nätverksbygge i 1600-talets Hamburg', Kerstin Abukhanfusa (ed.), *Mare nostrum: Om Westfaliska freden och Östersjön som ett svenskt maktcentrum* (Stockholm: Riksarkivet, 1999: 243–55)

Dyskant, Józef Wiesław, *Bitwy polskie: Oliwa 1627* (Warsaw: Bellona, 1993)

Englund, Peter, *Ofredsår* (Stockholm: Atlantis, 1993)

Ericson, Lars, *Svenska knektar: Indelta soldater, ryttare och båtsmän i krig och fred* (Lund: Historiska Media, 1995)

Ericson, Lars, 'Fortifikationens ritare', *Att illustrera stormakten: Den svenska Fortifikationens bilder 1654–1719* (Lund: Historiska Media, 2001: 23–27)

Ericson, Lars, *Krig och krigsmakt under svensk stormaktstid* (Lund: Historiska Media, 2004)

Ericson, Lars, and Sandstedt, Fred, *Fanornas folk: Den svenska arméns soldater under 1600-talets första hälft* (Stockholm: Armémuseum, 1982)

Ericson, Lars, Hårdstedt, Martin, Iko, Per, Sjöblom, Ingvar, and Åselius, Gunnar, *Svenska slagfält* (np: Wahlström & Widstrand, 2003)

Ericson Wolke, Lars, Larsson, Göran, and Villstrand, Nils Erik, *Trettioåriga kriget: Europa i brand 1618–1648* (Lund: Historiska Media, 2006)

Fredholm von Essen, Michael, 'Sweden's Intelligence Services: Guide to the Study of Intelligence', *The Intelligencer* 21:2. AFIO, 2015: 55–61

Fredholm von Essen, Michael, *Muscovy's Soldiers: The Emergence of the Russian Army 1462–1689* (Warwick: Helion, 2018)

Fredholm von Essen, Michael, *Charles XI's War: The Scanian War between Sweden and Denmark, 1675–1679* (Warwick: Helion, 2019)

Frost, Robert I, *The Northern Wars: War, State and Society in Northeastern Europe, 1558–1721* (Harlow, Essex: Longman, 2000)

Gäfvert, Björn, 'Kartor och krig: Svensk militär kartering under Trettioåriga kriget', *Krig och fred i källorna* (Riksarkivet: Årsbok för Riksarkivet och Landsarkiven, 1998: 88–100)

Gäfvert, Björn, 'Att känna territoriet: Svensk kartering under Trettioåriga krigets dagar', Kerstin Abukhanfusa (ed.), *Mare nostrum: Om Westfaliska freden och Östersjön som ett svenskt maktcentrum* (Stockholm: Riksarkivet, 1999: 74–92)

Generalstaben, *Sveriges krig 1611–1632* (Stockholm: Generalstaben, 1936–1939)

Glete, Jan, *Navies and Nations: Warships, Navies and State Building in Europe and America, 1500–1860*, 2 vols (Stockholm: Almqvist & Wiksell International, Acta Universitatis stockholmiensis (Stockholm Studies in History) 48:1, 1993)

Glete, Jan, *Värvade regementen i svensk tjänst 1618–1631*. Working paper, 30 September 2005

Göransson, Göte, *Gustav II Adolf och hans folk* (np: Bra Böcker, 1994)

Grosjean, Alexia, *An Unofficial Alliance, Scotland and Sweden 1569–1654* (Leiden: Brill, 2003)

Gullberg, Tom, and Huhtamies, Mikko, *På vakt i öster*, vol. 3 (np: Schildts, 2004)

Gyllenstierna, Ebbe, 'Karl Gustav Wrangel och Henri Turenne: Svensk och fransk krigföring under trettioåriga krigets sista skede', *Meddelande* 36 (Stockholm: Armémuseum, 1976: 39–51)

Hamilton, Edward, and Sandström, Anders, *Sjöstrid på Wasas tid: Taktik, artilleri och handeldvapen* (Stockholm: Sjöhistoriska museet, Wasastudier 9, 1982)

Hamilton, Henning, *Afhandling om krigsmaktens och krigskonstens tillstånd i Sverige, under Konung Gustaf II Adolfs regering* (Stockholm: Kongl. Vitterhets Historie och Antiquitets Academiens handlingar 17, 1846)

Harte, Walter, *The History of Gustavus Adolphus, King of Sweden* (London: John Joseph Stockdale, 3rd edn 1807. Reprinted in facsimile by Pallas Armata, Tonbridge, Kent, 1995)

Hedberg, Jonas (ed.), *Kungl. Artilleriet: Yngre vasatiden* (Stockholm: Militärhistoriska Förlaget, 1985)

Holl, Brigitte, 'Wallensteins angebliche Skizze für die Schlacht bei Lützen', *Der Dreissigjährige Krieg: Beiträge zu seiner Geschichte* (Vienna: Schriften des Heeresgeschichtlichen Museums in Wien 7, 1976: 59–78)

Jägerhorn, Sebastian, *Hårdast bland de hårda: En kavalleriofficer i fält* (Stockholm: Medströms, 2018)

Jakobsson, Theodor, *Lantmilitär beväpning och beklädnad under äldre Vasatiden och Gustav II Adolfs tid* (Published both separately and as Suppl. Vol. 2 in Generalstaben, *Sveriges krig 1611–1632*. Stockholm: Generalstaben, 1938)

Koczorowski, Eugeniusz, *Historyczne bitwy: Oliwa 1627* (Warsaw, Bellona, 2002)

Langer, Herbert, *Trettioåriga kriget* (np: Natur och Kultur, 2nd edn 1989. First published 1978 as *Hortus Bellicus: Der Dreißigjährige Krieg*)

Lappalainen, Mirkka, *Det nordiska lejonet: Gustav II Adolf och Finland 1611–1632* (np: Fischer & Co, 2016)

Łopatecki, Karol, and Walczak, Wojciech, *Mapy i plany Rzeczypospolitej XVII w. znajdujące się w archiwach w Sztokholmie / Maps and Plans of the Polish Commonwealth of the 17th C. in Archives in Stockholm* 1 (Warsaw: Ministerstwo Kultury i Dziedzictwa Narodowego, 2011)

Marks, Adam, *England, The English and the Thirty Years' War (1618–1648)*. University of St. Andrews, dissertation, 2012.

McNair, Don, *The Struggle for Stralsund, 1627* (Farnham, Surrey: Pike and Shot Society, 2012)

Murdoch, Steve. 'The Northern Flight: Irish Soldiers in Seventeenth-century Scandinavia'. Thomas O'Connor and Mary Ann Lyons (eds.), *The Ulster Earls and Baroque Europe: Refashioning Irish Identities, 1600–1800* (Dublin: Four Courts Press, 2010), pp.88-109

Murdoch, Steve; and Alexia Grosjean, *Alexander Leslie and the Scottish Generals of the Thirty Years' War, 1618–1648* (Abingdon: Routledge, 2016)

Norberg, Axel, *Polen i svensk politik 1617–26* (Stockholm: Stockholm University, dissertation, 1974)

Östergren, Stefan, *Sigismund:En biografi över den svensk-polske monarken* (np: Fredestad, 2005)

Parker, Geoffrey, *The Thirty Years' War* (np: Barnes & Noble, 1993. First published by Routledge, 1987)

Petri, Gustaf, *Kungl. Första livgrenadjärregementets historia* 1: *Östgötafänikorna till och med år 1618* (Stockholm: P.A. Norstedt & Söner, 1926)

Petri, Gustaf, with Westman, Erik, *Kungl. Första livgrenadjärregementets historia* 2: *Östgöta regemente till fot 1619–1679* (Stockholm: P.A. Norstedt & Söner, 1928)

Pleiss, Detlev, *Bodenständige Bevölkerung und fremdes Kriegsvolk: Finnen in deutschen Quartieren 1630–1650* (Turku: Åbo Akademi, 2017)

Porshnev, B.F., *Muscovy and Sweden in the Thirty Years' War, 1630–1635* (Cambridge: Cambridge University Press, 1995). Edited by Paul Dukes

Roberts, Michael, *Gustavus Adolphus: A History of Sweden 1611–1632* (London: Longmans, Green and Co., 2 vols, 1953–1958)

Roberts, Michael, 'Gustavus Adolphus and the Art of War', *Historical Studies* 1 (1958): 69–85

Roberts, Michael, *Sweden as a Great Power 1611–1697: Government; Society; Foreign Policy* (London: Edward Arnold, 1968)

Roberts, Michael, 'The Political Objectives of Gustavus Adolphus in Germany, 1630–1632', *Transactions of the Royal Historical Society* 7 (1957): 19–46

Rumenius, John, *Wästgöta Ryttare i 30:åriga kriget: 1000 frivilliga bönder drar ut i kriget 1630* (Stockholm: Nyblom, 1987)

Rystad, Göran (ed.), *Historia kring Trettioåriga kriget* (Stockholm: Wahlström & Widstrand, 1963)

Schürger, André, *The Archaeology of the Battle of Lützen: An Examination of 17th Century Military Material Culture* (Glasgow: University of Glasgow, Dissertation, 2015)

Seitz, Heribert, 'Den karolinska värjans taktiska betydelse för kavalleriet', *Ny Militär Tidskrift* 8, 1944: 1–12

Seitz, Heribert, 'De försvunna värjorna: Svensk sidobeväpning under 30-åriga kriget', *Fataburen: Nordiska museets och Skansens årsbok* 1946: 93–110

Seitz, Heribert, *Svärdet och värjan som armévapen* (Stockholm: Kungl. Armémuseum, 1955)

Skenbäck, Urban, *Sjöfolk och knektar på Wasa* (Stockholm: Sjöhistoriska museet, Wasastudier 11, 1983)

Tarkiainen, Kari, 'Rysstolkarna som yrkeskår 1595–1661', *Historisk tidskrift* 92 (Stockholm: Svenska historiska föreningen,1972: 490–522)

Ulfhielm, Hans, Granefelt, Eric (eds). *Kungl. Artilleriet: Svenska Artilleriet i Östersjöprovinserna 1561–1721* (np: Militärhistoriska Förlaget, 2005)

Biographical Databases

Murdoch, Steve; and Alexia Grosjean. The Scotland, Scandinavia and Northern European Biographical Database (SSNE), <https://www.st-andrews.ac.uk/history/ssne/>

Riksarkivet (Swedish National Archives). Svenskt biografiskt lexikon (SBL), <https://sok.riksarkivet.se/SBL/>

Warlich, Bernd, Der Dreißigjährige Krieg in Selbstzeugnissen, Chroniken und Berichten, <https://www.30jaehrigerkrieg.de/>

Other titles in the Century of the Soldier series

No 1 *'Famous by my Sword'. The Army of Montrose and the Military Revolution* Charles Singleton (ISBN 978-1-909384-97-2)*

No 2 *Marlborough's Other Army. The British Army and the Campaigns of the First Peninsula War, 1702–1712* Nick Dorrell (ISBN 978-1-910294-63-5)

No 3 *Cavalier Capital: Oxford in the English Civil War 1642–1646* John Barratt (ISBN 978-1-910294-58-1)

No 4 *Reconstructing the New Model Army Volume 1: Regimental Lists April 1645 to May 1649* Malcolm Wanklyn (ISBN 978-1-910777-10-7)

No 5 *To Settle the Crown: Waging Civil War in Shropshire, 1642-1648* Jonathan Worton (ISBN 978-1-910777-98-5)

No 6 *The First British Army, 1624-1628. The Army of the Duke of Buckingham* Laurence Spring (ISBN 978-1-910777-95-4)

No 7 *Better Begging Than Fighting: The Royalist Army in Exile in the War against Cromwell 1656-1660* John Barratt (ISBN 978-1-910777-72-5)*

No 8 *Reconstructing the New Model Army Volume 2: Regimental Lists 1649 to 1663* Malcolm Wanklyn (ISBN 978-1-910777-88-6)*

No 9 *The Battle of Montgomery 1644: The English Civil War in the Welsh Borderlands* Jonathan Worton (ISBN 978-1-911096-23-8)*

No 10 *The Arte Militaire: The Application of 17th Century Military Manuals to Conflict Archaeology* Warwick Louth (ISBN 978-1-911096-22-1)*

No 11 *No Armour But Courage: Colonel Sir George Lisle, 1615-1648* Serena Jones (ISBN 978-1-911096-47-4)

No 12 *Cromwell's Buffoon: The Life and Career of the Regicide, Thomas Pride* Robert Hodkinson (ISBN 978-1-911512-11-0)

No 14 *Hey for Old Robin! The Campaigns and Armies of the Earl of Essex During the First Civil War, 1642-44* Chris Scott & Alan Turton (ISBN 978-1-911512-21-9)*

No 15 *The Bavarian Army during the Thirty Years War* Laurence Spring (ISBN 978-1-911512-39-4)

No 16 *The Army of James II, 1685-1688: The Birth of the British Army* Stephen Ede-Borrett (ISBN 978-1-911512-39-4)*

No 17 *Civil War London: A Military History of London under Charles I and Oliver Cromwell* David Flintham (ISBN 978-1-911512-62-2)*

No 18 *The Other Norfolk Admirals: Myngs, Narbrough and Shovell* Simon Harris (ISBN 978-1-912174-22-5)

No 19 *A New Way of Fighting: Professionalism in the English Civil War* Serena Jones (ed) (ISBN 978-1-911512-61-5)

No 20 *Crucible of the Jacobite '15: The Battle of Sheriffmuir 1715* Jonathan Oates (ISBN 978-1-911512-89-9)

No 21 *'A Rabble of Gentility': The Royalist Northern Horse, 1644-45* John Barratt (ISBN 978-1-911512-98-1)*

No 22 *Peter the Great Humbled: The Russo-Ottoman War of 1711* Nicholas Dorrell (ISBN 978-1-911512-31-8)*

No 23 *The Russian Army In The Great Northern War 1700-21: Organisation, Matériel, Training, Combat Experience and Uniforms* Boris Megorsky (ISBN 978-1-911512-88-2)*

No 24 *The Last Army: The Battle of Stow-on-the-Wold and the End of the Civil War in the Welsh Marches, 1646* John Barratt (ISBN 978-1-912390-21-2)*

No 25 *The Battle of the White Mountain 1620 and the Bohemian Revolt, 1618-22* Laurence Spring (ISBN 978-1-912390-22-9)*

No 26 *The Swedish Army in the Great Northern War 1700-21: Organisation, Equipment, Campaigns and Uniforms* Lars Ericson Wolke (ISBN 978-1-912390-18-2)*

No 27 *St. Ruth's Fatal Gamble: The Battle of Aughrim 1691 and the Fall Of Jacobite Ireland* Michael McNally (ISBN 978-1-912390-38-0)

No 28 *Muscovy's Soldiers: The Emergence of the Russian Army 1462-1689* Michael Fredholm von Essen (ISBN 978-1-912390-10-6)*

No 29 *Home and Away: The British Experience of War 1618–1721* Serena Jones (editor) (ISBN 978-1-911628-01-9)

No 30 *From Solebay to the Texel: The Third Anglo-Dutch War, 1672-1674* Quintin Barry (ISBN 978-1-911628-03-3)*

No 31 *The Battle of Killiecrankie: The First Jacobite Campaign, 1689-1691* Jonathan Oates (ISBN 978-1-912390-98-4)*

No 32 *The Most Heavy Stroke: The Battle of Roundway Down 1643* Chris Scott (ISBN 978-1-912390-99-1)*

No 33 *The Cretan War (1645-1671): The Venetian-Ottoman Struggle in the Mediterranean* Bruno Mugnai (ISBN 978-1-911628-04-0)*

No 34 *Peter the Great's Revenge: The Russian Siege of Narva in 1704* Boris Megorsky (ISBN 978-1-911628-02-6)*

No 35 *The Battle Of Glenshiel: The Jacobite Rising In 1719* Jonathan Worton (ISBN 978-1-912174-97-3)*

No 36 *Armies And Enemies Of Louis XIV: Volume 1 - Western Europe 1688-1714: France, Britain, Holland* Mark Allen (ISBN 978-1-911628-05-7)*

No 37 *William III's Italian Ally: Piedmont and the War of the League of Augsburg 1683-1697* Ciro Paoletti (ISBN 978-1-911628-58-3)*

No 38 *Wars and Soldiers in the Early Reign of Louis XIV: Volume 1 - The Army of the United Provinces of the Netherlands, 1660-1687* Bruno Mugnai (ISBN 978-1-911628-59-0)*

No 39 *In The Emperor's Service: Wallenstein's Army, 1625-1634* Laurence Spring (ISBN 978-1-911628-56-9)*

No 40 *Charles XI's War: The Scanian War Between Sweden and Denmark, 1675-1679* Michael Fredholm von Essen (ISBN 978-1-911628-00-2)*

No 41 *The Armies and Wars of The Sun King 1643-1715: Volume 1: The Guard of Louis XIV* René Chartrand (ISBN 978-1-911628-60-6)*

No 42 *The Armies Of Philip IV Of Spain 1621-1665: The Fight For European Supremacy* Pierre Picouet (ISBN 978-1-911628-61-3)*

No 43 *Marlborough's Other Army: The British Army and the Campaigns of the First Peninsular War, 1702–1712* Nicholas Dorrell (ISBN 978-1-911628-40-8)*

No 44 *The Last Spanish Armada: Britain And The War Of The Quadruple Alliance, 1718-1720* Jonathan D. Oates (ISBN 978-1-912866-61-8)*

No 45 *Essential Agony: The Battle of Dunbar 1650* Arran Johnston (ISBN 978-1-912866-58-8)*

No 46 *The Campaigns of Sir William Waller* Laurence Spring (ISBN 978-1-912866-56-4)*

No 47 *Wars and Soldiers in the Early Reign of Louis XIV: Volume 2 - The Imperial Army, 1660-1689* Bruno Mugnai (ISBN 978-1-912866-55-7)*

No 48 *The Saxon Mars and His Force: The Saxon Army During The Reign Of John George III 1680–1691* Alexander Querengässer (ISBN 978-1-912866-60-1)*

No 49 *The King's Irish: The Royalist Anglo-Irish Foot of the English Civil War* John Barratt (ISBN 978-1-912866-53-3)*

No 50 *The Armies and Wars of the Sun King 1643-1715: Volume 2: The Infantry of Louis XIV* René Chartrand (ISBN 978-1-912866-54-0)*

No 51 *More Like Lions Than Men: Sir William Brereton and the Cheshire Army of Parliament, 1642-46* Andrew Abram (ISBN 978-1-913118-82-2)*

No 52 *I Am Minded to Rise: The Clothing, Weapons and Accoutrements of the Jacobites from 1689 to 1719* Jenn Scott (ISBN 978-1-912866-63-2)*

No 53 *The Perfection of Military Discipline: The Plug Bayonet and the English Army 1660-1705* Mark W. Shearwood (ISBN 9781913118877)*

No 54 *The Lion From the North: The Swedish Army During the Thirty Years War: Volume 1, 1618-1632* Michael Fredholm von Essen (ISBN 978-1-911628-57-6)*

Books within the series are published in two formats: 'Falconets' are paperbacks, page size 248mm x 180mm, with high visual content including colour plates; 'Culverins' are hardback monographs, page size 234mm x 156mm. Books marked with * in the list above are Falconets, all others are Culverins.

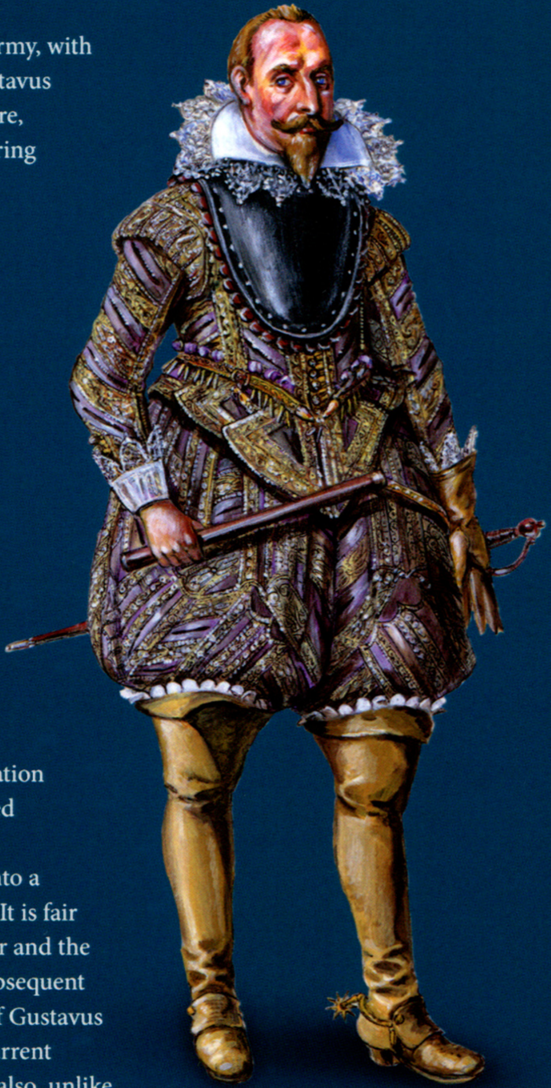
Submissions

The publishers welcome submissions for this series. Please contact us via email (info@helion.co.uk), or in writing to Helion & Company Limited, Unit 8 Amherst Business Centre, Budbrooke Road, Warwick, CV34 5WE.

HELION & COMPANY

Century of the Soldier 1618-1721

This book describes and analyses the early modern Swedish army, with a particular emphasis on the reforms introduced by King Gustavus Adolphus before and during the Thirty Years War. Furthermore, the book expands our understanding of the Swedish army during the Thirty Years War by also focusing on its operations on the eastern front, against Russian and Polish opponents, and not only on the better-known operations in Germany against the Catholic League and the Holy Roman Empire. Sweden had a long history of conflict with neighbouring countries, and the reforms introduced by King Gustavus Adolphus had their origin in wars fought in the early seventeenth century, before or in the early phases of the Thirty Years War. The Kalmar war with Denmark, the Novgorod and Pskov campaigns in Russia, the conquest of Livonia, and the war with Poland played important roles in preparing the Swedish army for the wars on the continent from 1630 onwards. While some of the technical and tactical innovations attributed to the Swedish Army in the Thirty Year's War are myths, others were real. Possibly of yet more enduring importance were the Swedish Chancellor Axel Oxenstierna's administrative reforms. A conscription system was established which consistently managed to raise troops, despite the small population of Sweden and its territories. A logistics system was introduced which could supply the armies, despite the vast geographical depth of operations. The intelligence service was developed into a comprehensive support establishment to military operations. It is fair to say that the Swedish army that entered the Thirty Years War and the organisation that enabled it formed the foundation for the subsequent Swedish rise to regional great power status. While the army of Gustavus Adolphus has been described elsewhere, the book includes current research that has not yet appeared in the English language. It also, unlike most previous works, explains how the Swedish experiences on the eastern front influenced Gustavus Adolphus and his views on how to build a modern army that could challenge the established great powers on the Continent.



Century of the Soldier
1618-1721

HELION & COMPANY

ISBN 978-1-911628-57-6
9 781911 628576